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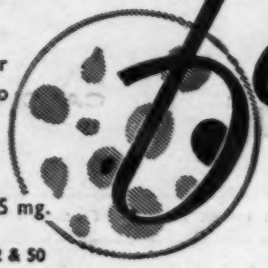

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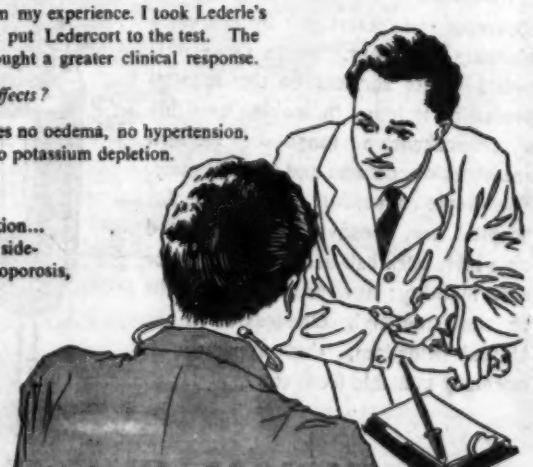

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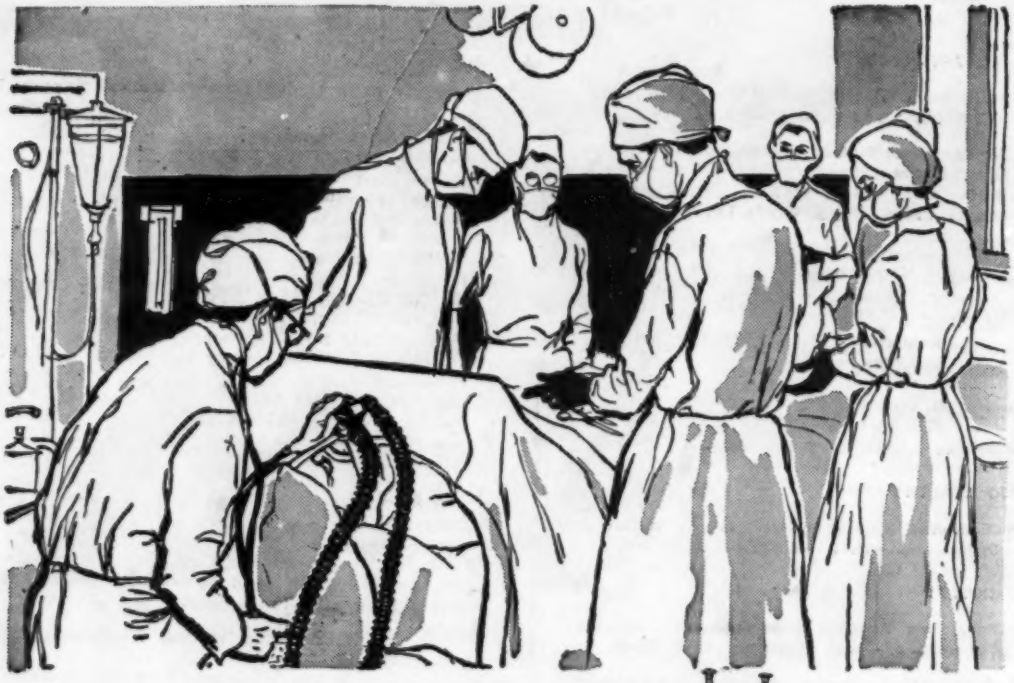

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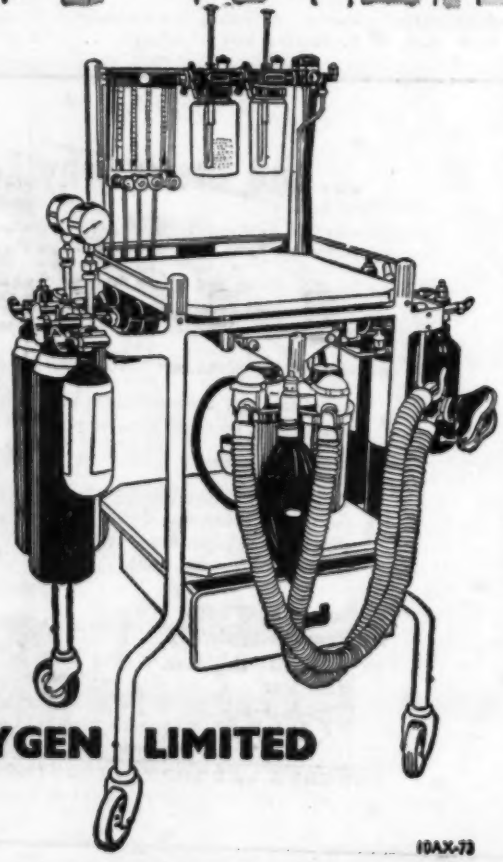

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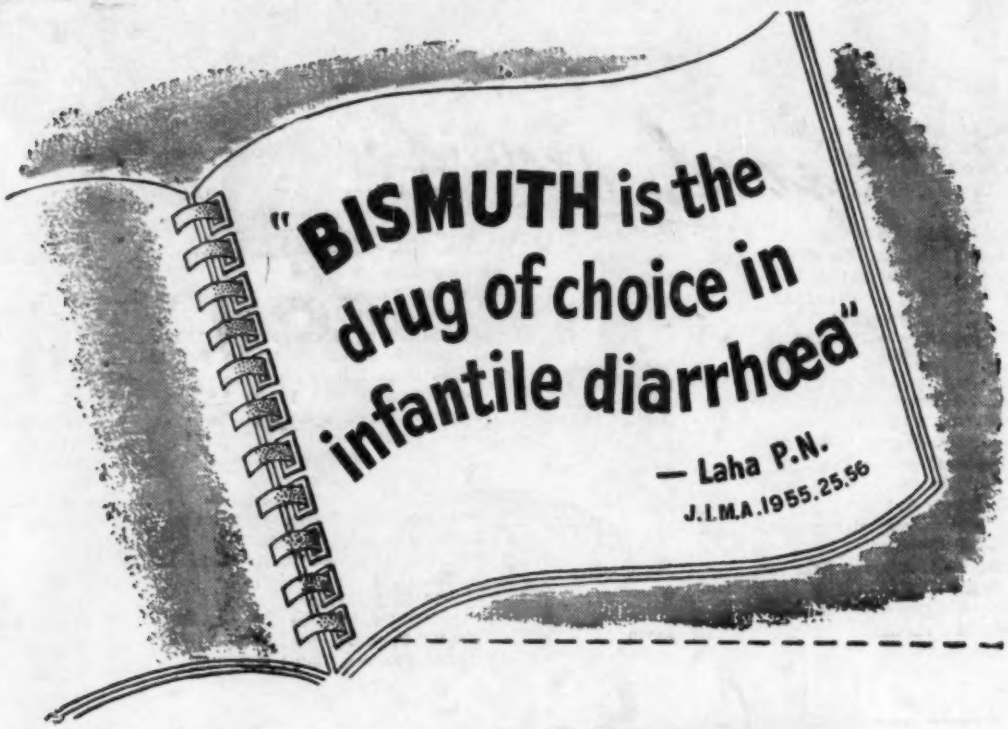

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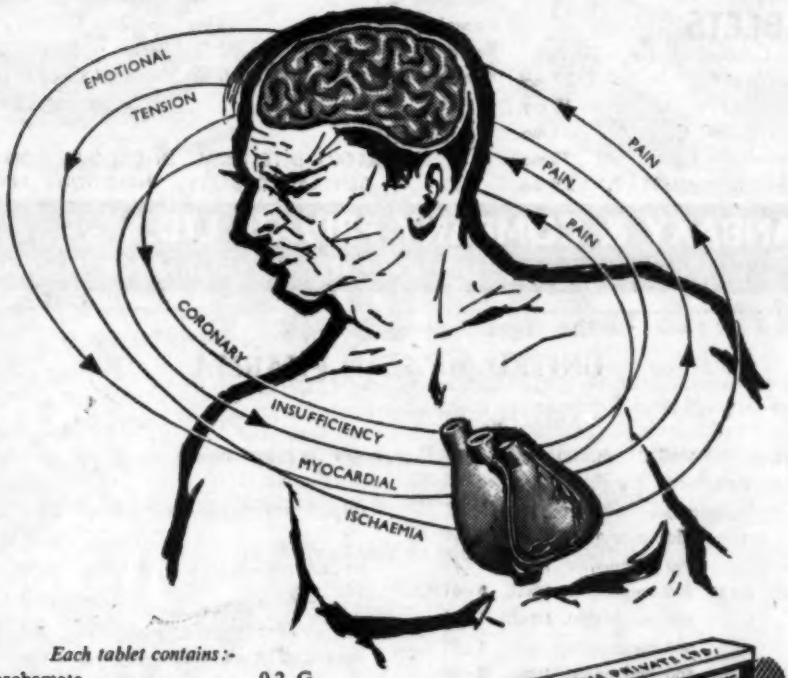

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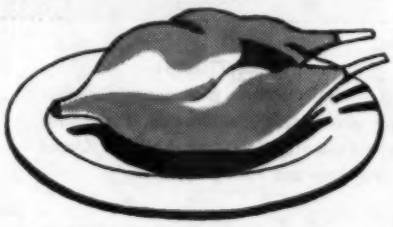

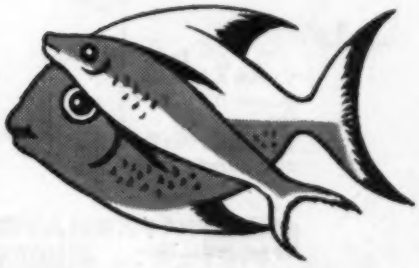

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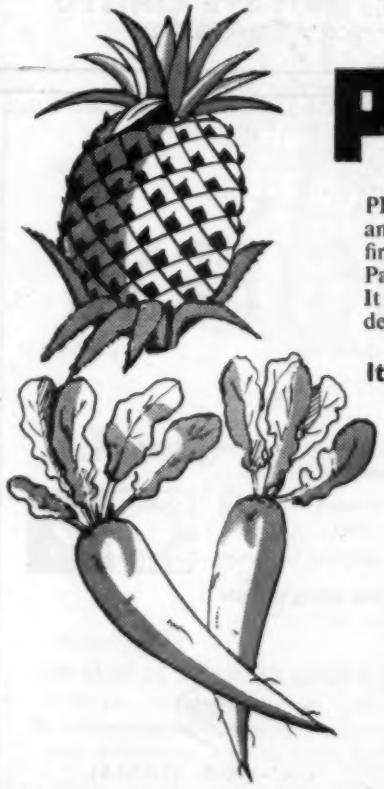

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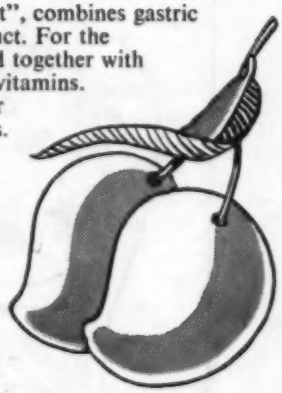

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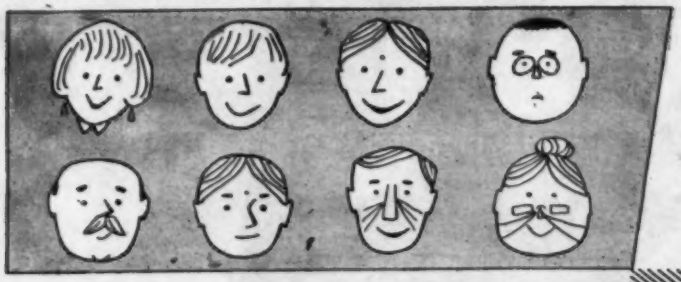

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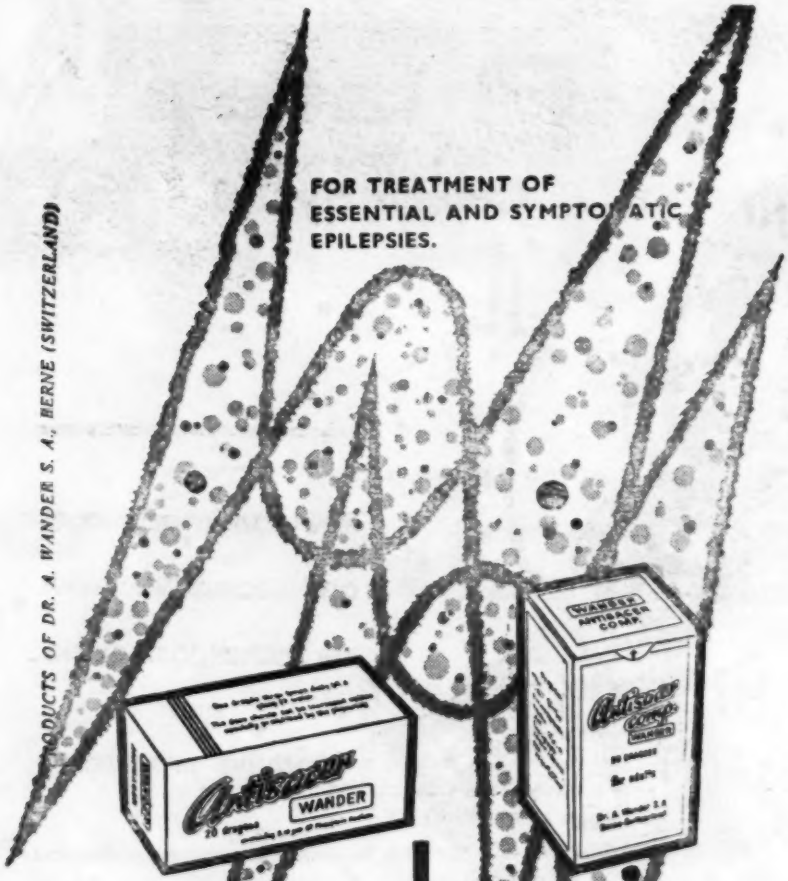

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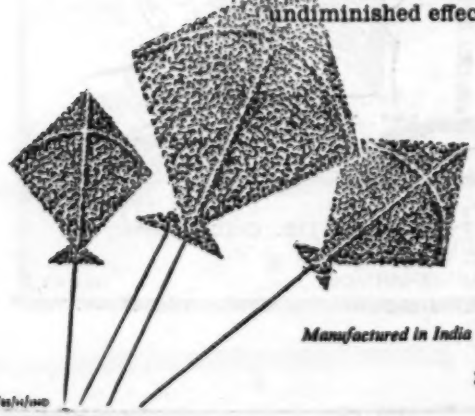

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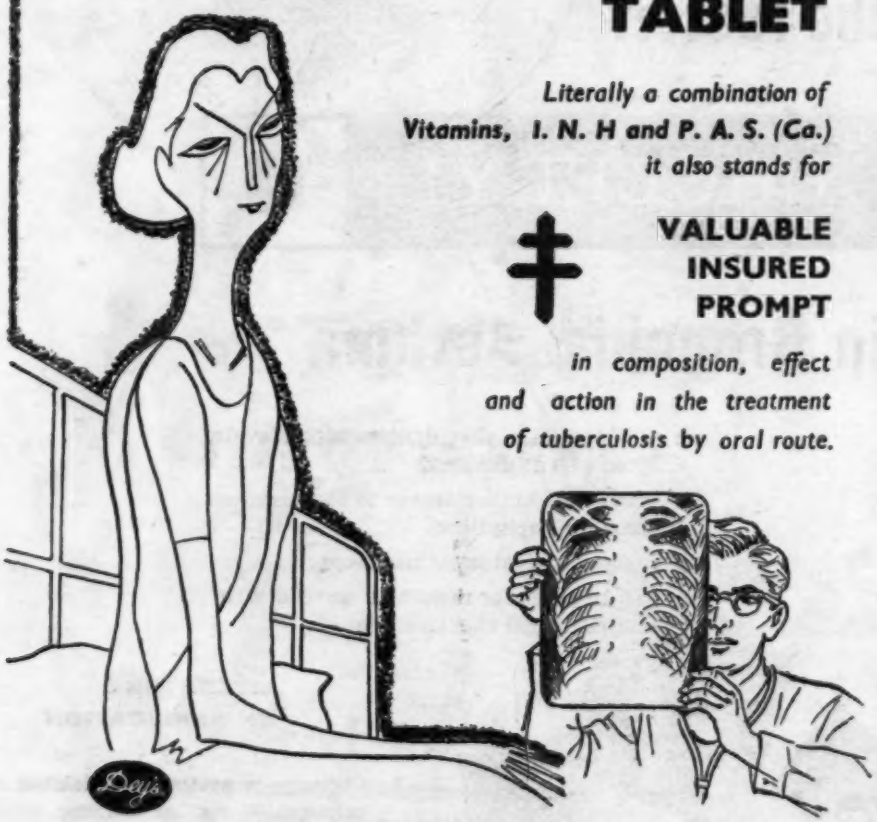

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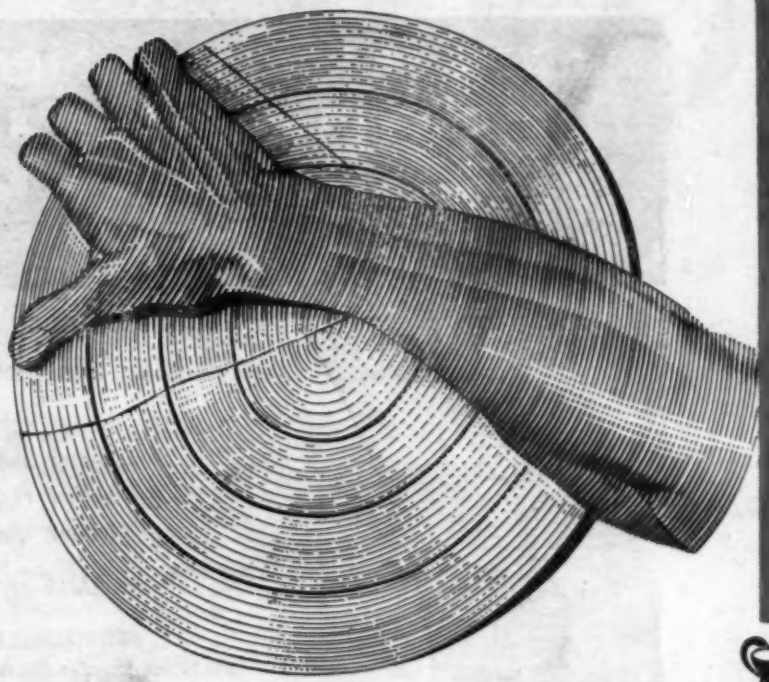

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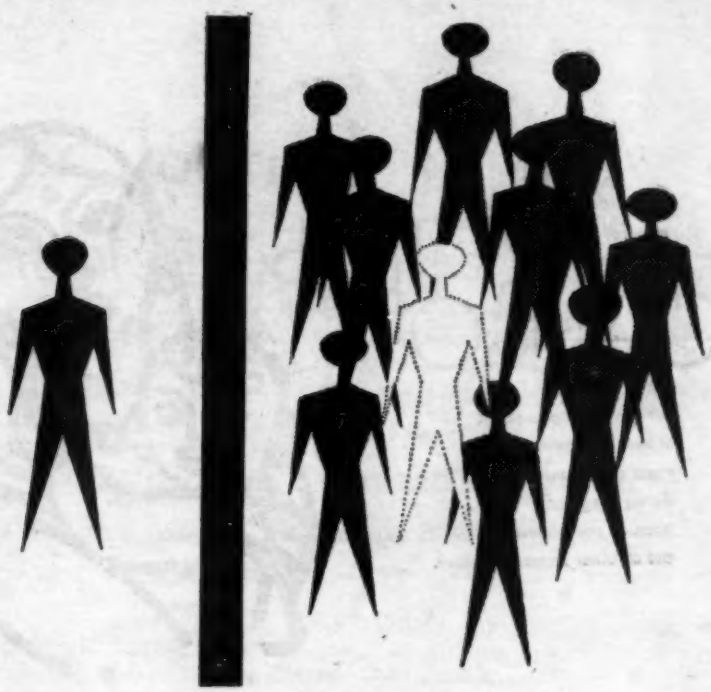

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ORIGINAL ARTICLES

CORTICOSTEROIDS IN TUBERCULOUS MENINGITIS

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Corticosteroids, as an adjuvant to usual chemotherapeutic agents, were introduced in the management of tuberculous meningitis in 1951 by Kinsell. Since then, many reports have appeared on the subject. Many of these reports have confirmed their utility while others have refuted such a claim. This study was undertaken to evaluate the present status of corticosteroids in the management of tuberculous meningitis in relation to other forms of therapy.

MATERIAL AND METHODS

55 cases of tuberculous meningitis admitted to the medical wards of Gandhi Memorial and Associated Hospitals and Kasturba T.B. Hospital, Lucknow, have been studied in detail. 15 patients were treated entirely with chemotherapy which consisted of 1 g. of streptomycin given I.M. daily for 60 days and isoniazid in dosage of 10 mg./kg. body weight daily for 60 days. After treatment for 60 days 8 g. of PAS per day was given orally in place of streptomycin, while isoniazid was continued as before. The remaining 40 patients were given 20 mg. of prednisolone per day orally in four divided doses in addition to the chemotherapeutic agents (*vide supra*).

These cases were subjected to detailed clinical and laboratory studies. The stage of illness was classified according to the criteria laid down by M.R.C. Report (1948).

Besides the above 55 cases, 25 additional cases were selected from the old records of the hospital. All cases of tuberculous meningitis admitted to the hospital during the last 4 years and treated with intrathecal streptomycin in addition to the usual chemotherapy were sorted out, and out of these 25 cases were selected for comparison.

The clinical condition of these patients at the time of their discharge from the hospital was classified as follows:

1. *Recovered*—Cases which at the time of discharge from the hospital showed no clinical or biochemical evidences of meningitis. Isolated finding of raised C.S.F. proteins in the absence of any other evidences of meningitis was ignored.
2. *Partly recovered*—Cases which at the time of their discharge from the hospital had been having one or the other residual sequela.

RESULTS AND DISCUSSION

I. THE FINAL RESULT:

A clear superiority of the results obtained in the cortisone group of cases is evident from our study. Similar results were reported by other workers also (Bulkley, 1953; Ashby and Grant, 1955; Choremis *et al*, 1957; Wasz-Hockert, 1957). Bulkley (*loc. cit.*) compared the results obtained in 31 cases who were given ACTH with those of another 31 cases who, instead of ACTH, had received intrathecal streptomycin, in addition to usual chemotherapy. He was impressed by the improved results obtained with the corticotrophin.

In our series intrathecal streptomycin therapy did not appear to offer any advantage over chemotherapy alone. On the other hand, it certainly predisposed the individuals to the ototoxic side-reaction of streptomycin. Other workers also

TABLE 1—SHOWING THE FINAL RESULTS OBTAINED FROM DIFFERENT FORMS OF TREATMENT

Treatment groups	Completely recovered	Partly recovered	Expired
Chemotherapy ...	7 (46·6%)	2 (13·4%)	6 (40%)
Intrathecal streptomycin ...	10 (40%)	4 (16%)	11 (44%)
Cortisone ...	28 (70%)	6 (15%)	6 (15%)

hold that following the advent of INH, this form of therapy may not be required at all (Bulkley, 1953 ; Douglas, 1953 ; Spies *et al*, 1954 ; Veterans Administration Study, 1954 ; Therapeutic Committee of American Trudeau Society, 1954 ; Weiss *et al*, 1957 ; Murras, 1958). As such, today intrathecal streptomycin therapy has no place in the management of tuberculous meningitis. The staunch supporters of this form of therapy also have started believing in moderation (Smellie, 1954 ; Lorber, 1956 ; McKendrick and Grose, 1957 ; Scottish Trial Committee Report, 1957). Veterans Administration (1954) treated 287 cases and divided them into 4 groups. The best results were obtained in cases who were given INH as a form of treatment. Of 39 advanced cases, 8 cases expired, and out of these 8 cases, 6 had received intrathecal streptomycin therapy. An editorial (*Brit. M. J.* 1955) stated that this was the most solid piece of evidence to show that intrathecal streptomycin might no longer be needed.

II. RESULTS OBTAINED IN CASES IN RELAPSE :

We had 5 such cases, and all of them had come in an advanced stage. These cases were treated with corticosteroids in addition to chemotherapy. The results, which were not unexpected, emphasise that cases in relapse have a poorer prognosis.

TABLE 2—SHOWING THE FATE OF CASES WHO HAD COME IN RELAPSE

No. of cases	Treatment	Recovered	Expired
5	Cortisone	2 (40%)	3 (60%)

The reasons for such a result is far from clear. Resistance of the bacilli to chemotherapeutic agents does not appear to be a significant factor for, it is well known that the bacilli, except for those in a cavity, either in the lungs or in the kidneys, do not grow resistant to usual chemotherapy. The incidence of resistant bacilli leading to tuberculous meningitis is so rare that very few reports have appeared on the subject (Melnotte *et al*, 1955). Perhaps, some unknown factors may be operating, since, in spite of our best efforts, three cases continued to follow a downward course and expired within two weeks of admission.

III. RESULTS OBTAINED IN CASES TRANSFERRED FROM ONE TREATMENT GROUP TO ANOTHER :

Out of a total of 6 cases in this group, 2 died and 4 survived when transferred from chemotherapy to cortisone group. These cases had either ceased to respond to chemotherapy alone or had started deteriorating. Although, too few in number for statistical purposes, these cases merit considerable attention in view of the fact that they can be regarded as having served as their own controls. Since two-thirds of these cases ultimately recovered completely, it can well be concluded that corticosteroids had helped them to recover. Thus, in these cases the superiority of steroid therapy over chemotherapy alone was established.

TABLE 3—SHOWING THE FATE OF CASES TRANSFERRED FROM CHEMOTHERAPY GROUP TO CORTISONE GROUP

Previous treatment	No. of cases	Present treatment	Recovered	Expired
Chemotherapy	6	Cortisone	4 (66·6%)	2 (33·4%)

IV. NEUROLOGICAL LESIONS PRIOR TO AND AFTER THE THERAPY :

The commonest neurological lesions observed were those of III, IV and VI nerve paralysis and alterations in the mental status of the patients. These lesions tended to regress as the patients improved and most of the cases had recovered completely. However, it was significant that residual neurological lesions were present in approximately 15 per cent cases in all the three groups.

TABLE 4—SHOWING THE NATURE OF NEUROLOGICAL LESIONS AND THE EFFECT OF THERAPY ON THEM

Neurological status	Chemotherapy		Intrathecal streptomycin		Cortisone	
	Previous lesions	Residual lesions	Previous lesions	Residual lesions	Previous lesions	Residual lesions
III, IV & VI Nerves	3 (20·1%)	1 (6·7%)	4 (16%)	—	12 (30%)	4 (10%)
Alterations in mental status	3 (20·1%)	1 (6·7%)	8 (32%)	1 (4%)	8 (20%)	2 (5%)

While such an observation is a significant one, it does not permit of any hasty conclusions. The important point to observe is that 8th nerve lesions were absent in all the three groups of cases prior to initiation of therapy, but appeared in 12 per cent of cases of intrathecal streptomycin group at the time of their discharge from the hospital. This finding was not present in other groups of cases and again adds to the drawbacks of intrathecal streptomycin therapy.

The duration of stay in the hospital has an important effect on the incidence of residual neurological changes (*vide infra.*)

V. MEAN PERIOD OF STAY IN THE HOSPITAL:

There was practically no difference in the two groups of cases, viz., chemotherapy only and intrathecal streptomycin. However, the cases who had received corticosteroids in addition, stayed in the hospital for much shorter period. This shows that corticosteroids can cut down the course of tuberculous meningitis sharply and bring speedier relief to the patient.

TABLE 5—SHOWING THE MEAN PERIOD OF STAY OF VARIOUS GROUPS OF PATIENTS IN THE HOSPITAL

Treatment groups	Mean period of stay
Chemotherapy	58·6 days
Intrathecal streptomycin	63·9 ,,
Cortisone	34·6 ,,

Owing to rapid subjective and objective relief obtained in the cortisone-treated cases, there was a tendency to their premature discharge from the hospital. Consequently, many cases with minor residual neurological sequelae in the cortisone group left the hospital. Hence, the incidence of partly recovered cases in the cortisone group (*vide supra*) was as much as 15 per cent.

VI. C.S.F. PROTEINS ON DISCHARGE:

Smith and Vollum (1953) and Saxena (1955) have mentioned that during the course of treatment, especially after intrathecal injections of streptomycin, the protein level may be increased markedly and may show a marked fluctuation from day to day. A sudden rise in proteins to a peak followed by an equally sudden fall during the next 24-48 hours was noted in the majority of their cases treated with intrathecal medications. These fluctuations continued for a few weeks after which the protein level tended to return to normal gradually. But proteins took much longer to return to normal than sugars and chlorides. In most cases at the time of discharge, the proteins were still high, though C.S.F. was normal in every other respect. In two cases belonging to the cortisone group lumbar puncture was not attempted at the time of discharge from the hospital.

TABLE 6—SHOWING THE STATUS OF C.S.F. PROTEINS ON DISCHARGE

Level of C.S.F. proteins (mg./100 ml.)	Chemotherapy	Intrathecal streptomycin	Cortisone
Normal ...	7 (77·8%)	5 (35·7%)	28 (82·3%)
Elevated ...	2 (22·2%)	9 (64·3%)	4 (11·8%)
50-100 ...	1 (11·1%)	8 (57·2%)	3 (8·85%)
35-50 ...	1 (11·1%)	1 (7·1%)	1 (2·95%)

Exactly similar experiences were recorded by us in our intrathecal streptomycin group. However, the picture was slightly altered in the other two groups. It was found that even when some of the patients had become normal clinically, the C.S.F. demonstrated an isolated finding of raised protein level. One of the cases of the cortisone group is reported below:

A.J., female, aged 20, was admitted to Kasturba T. B. Hospital on January 20, 1959 with complaints of neck rigidity, vomiting and semiconsciousness for the last 10 days. The clinical examination revealed typical evidences of meningitis, and x-ray of the chest revealed diffuse miliary infiltration of the lungs. Tuberculin test was negative. The patient was put in the cortisone group with 20 mg./day of prednisolone orally. She made a speedy clinical and neurological recovery. The C.S.F. findings ultimately became normal except for proteins which continued to remain at 60 mg. per cent level. She was discharged in a fit state.

VII. FOLLOW-UP STUDY:

This could be conducted in 40 cases only, and the period of follow-up varied with the individual group. This has been from 1 to 3 years in the intrathecal streptomycin group, while it was less than 6 months in the other groups. Only the cases belonging to Lucknow or around it could be studied. The cases belonging to chemotherapy and corticosteroid groups were still taking the medications regularly, while of those in the intrathecal streptomycin group, only 2 cases were still taking the drugs and the rest had stopped all medicaments.

Again, out of all those cases who could be followed up, the corticosteroid group was found to be doing better than the other two groups. Apparently, the incidence of relapse rate was higher in

TABLE 7—SHOWING THE RESULTS OF FOLLOW-UP STUDY

Treatment groups	No. of cases	Alive and healthy	Relapse	Expired	
				Tuberculous cause	Non-tuberculous cause
Chemotherapy	8	5 (62·5%)	2 (25%)	—	1 (12·5%)
Intrathecal streptomycin	9	6 (66·7%)	1 (11·1%)	2 (22·2%)	—
Cortisone ...	23	20 (87%)	2 (8·7%)	1 (4·3%)	—

the chemotherapy group. But these findings have to be accepted with caution in view of the fact that only 50 per cent of all the cases could be followed up. Besides, the period of follow-up varied with each group separately. Thirdly, it is possible that only those cases had presented themselves who might have been having some complaints. Another factor of importance is that out of a total of 9 cases in the intrathecal streptomycin group, only 2 had taken the drugs regularly, while the others had stopped taking the drugs. In spite of these limitations, one finds that for the same period of follow-up more cases in the chemotherapy group relapsed than those in the cortisone group.

From the above it appears that patients belonging to the cortisone group, on the whole, did better than those in the other two groups.

SUMMARY

The final results obtained in 80 cases of tuberculous meningitis revealed that in the chemotherapy group (15 cases treated with chemotherapy alone), 46·6 per cent cases had recovered completely, 13·4 per cent had partly recovered and 40 per cent of patients had expired. The corresponding figures for intrathecal streptomycin group (25 cases receiving intrathecal streptomycin in addition to chemotherapy) were 40 per cent, 16 per cent and 44 per cent respectively. In the cortisone group (40 cases treated with oral corticosteroids along with chemotherapy), however, these figures were 70 per cent, 15 per cent and 15 per cent respectively. These results were assessed at the time of discharge of the patient from the hospital. The patients were labelled as having partly recovered, when some neurological sequelae had been left behind, or C.S.F. examination revealed some abnormalities. An isolated finding of raised C.S.F. proteins, in the absence of clinical evidences of meningitis was present in 22·2 per cent in the chemotherapy group, 64·3 per cent in the intrathecal streptomycin group, and in 11·8 per cent in the cortisone group. This was not regarded as abnormal.

Residual sequelae consisted of III, IV or VIth nerve palsy in 6·7 per cent cases in chemotherapy group and in 10 per cent cases in the cortisone group. VIII nerve damage was peculiar to intrathecal streptomycin group, where it was present in 12 per cent cases. Mental alterations were recorded in 20 per cent cases of the chemotherapy group, 4 per cent of the intrathecal streptomycin group and 5 per cent of the corticosteroid group.

Only 2 cases out of 5 who had come to us in relapse, could recover completely with corticosteroid therapy. The other 3 cases expired in spite of the same treatment.

6 cases who had failed to respond to chemotherapy or had been following a downward clinical course, were transferred to the corticosteroid group. Out of these, 4 could be saved while the rest expired.

ACKNOWLEDGMENTS

We wish to express our thanks to Prof. B. B. Bhatia and other members of the staff of the department of medicine for permitting us to study their cases. Our grateful thanks are also due to the members of the house staff for their co-operation during the study.

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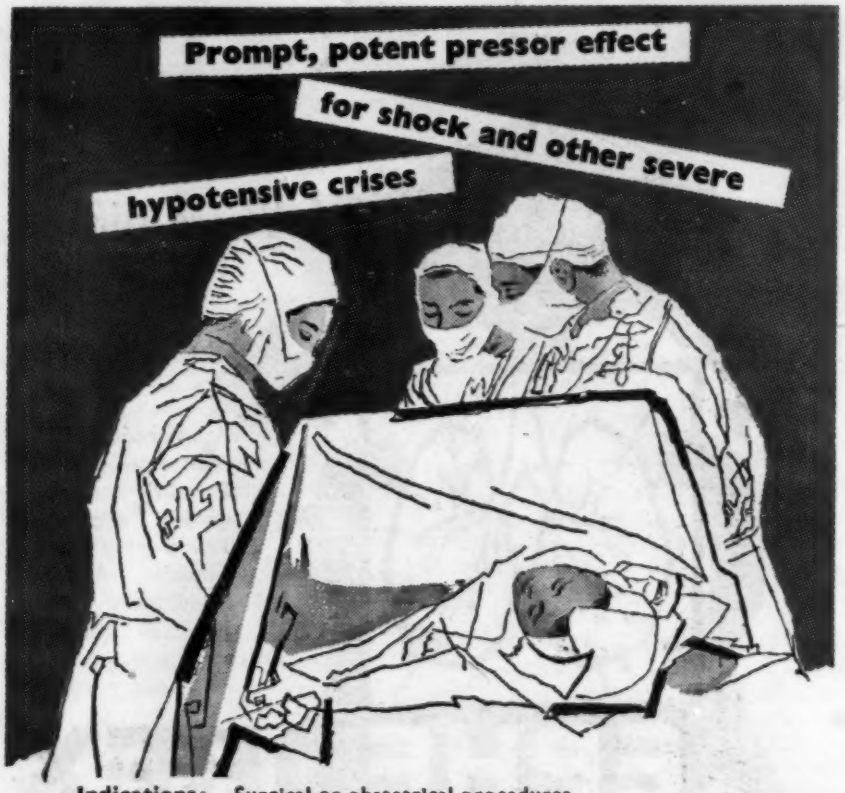

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SERUM MAGNESIUM IN WOMEN IN THE NORMAL STATE AND IN CERTAIN CONDITIONS

G. ACHARI, M.B.B.S., PH.D.

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The significance of the changes in the serum magnesium levels has not been studied in any detail so far. Flink (1956) refers to a characteristic syndrome—'gross staggers'—found in cows, calves and hares manifesting mostly nervous system disturbances due to a gross deficiency of serum magnesium. Joschimoglu and Panopoulos (1929) have emphasised the absence of a dietary defiency of magnesium in human beings but some clinical reports have attributed hypo- or hypermagnesaemia to be responsible for producing different syndromes. Retention of magnesium in blood had been found in renal diseases by Becher (1932), in hypertension by Albert *et al* (1958), and a deficiency has been reported in case of diabetic acidosis and delirium tremens by Flink (*loc. cit.*) and in epilepsy and other convulsive disorders by Greenburg *et al* (1938). Kruse *et al* (1932) have induced a form of tetany in rats that were raised on a low magnesium diet, and it seemed probable that cases showing convulsions or other conditions of increased neuromuscular activity would be encountered in which plasma magnesium is low. Haury and Cantarow (1942) have shown hypomagnesaemia in toxaemia of pregnancy. Eclamptic fits have been treated by intravenous injections of magnesium sulphate for a long time. So far hypomagnesaemia has not been found in malignant diseases (Blumgarten and Rhodenbung, 1927; Theis and Benedict, 1924; Haury and Cantarow, 1942). On review of literature Shear (1933) found contradictory and insufficient evidence of the association of dietary deficiency of magnesium with increased incidence of malignant neoplasms.

In the present work, by estimation of serum magnesium, we have tried to find out if there is any significant change in serum magnesium in eclampsia and cancer cervix.

MATERIALS AND METHODS

Serum magnesium was estimated in 27 normal women and in 15 cases of normal pregnancy, in 31 cases of eclampsia and in 19 cases of cancer cervix. 5 ml. of blood was collected from each individual and the serum was separated. The blood samples were taken before the start of any parenteral fluid therapy.

Serum magnesium was estimated spectrophotometrically using Unichem S.P. 500 at 560 (mμ) by the method of Orange and Rhein (1951). Titan yellow has been used as precipitating agent. By this method a calibration curve was first prepared by using known concentrations of magnesium solutions and the magnesium content of the unknown serum was read from this standard calibration curve.

RESULTS

The analysis of serum magnesium levels in 25 normal women is given in Table 1.

TABLE 1—SHOWING SERUM MAGNESIUM VALUE IN NORMAL WOMEN

Case No.	Serum magnesium (mg./100 ml.)	Case No.	Serum magnesium (mg./100 ml.)
1	2·25	14	2·32
2	2·32	15	2·05
3	2·85	16	2·12
4	2·48	17	2·66
5	1·80	18	2·28
6	2·43	19	1·95
7	3·20	20	2·08
8	2·54	21	2·12
9	2·28	22	3·00
10	2·15	23	2·58
11	2·00	24	2·18
12	2·80	25	1·94
13	2·76		

Mean—2·38; Minimum—1·30; Maximum—3·20; S.D.—0·35; S.E.—0·07

The study of the figures in Table 1 shows that the serum magnesium in normal subjects varies from 1·80 to 3·20 mg. per 100 ml., with a mean of $2{\cdot}38 \pm 0{\cdot}35$ per 100 ml. The values closely approximate those found by Haury (1940),

Having estimated serum magnesium in normal subjects, estimation of serum magnesium was undertaken in normal pregnancy.

The results of estimation of the serum magnesium levels in 15 cases of normal pregnancy are given in Table 2.

TABLE 2—SHOWING SERUM MAGNESIUM VALUE IN NORMAL PREGNANCY

Case No.	Serum magnesium (mg./100 ml.)	Case No.	Serum magnesium (mg./100 ml.)
1	2·35	9	1·70
2	2·50	10	2·00
3	3·20	11	1·93
4	2·53	12	2·50
5	3·00	13	2·50
6	2·35	14	2·53
7	2·50	15	2·47
8	2·18		

Mean—2·41; Minimum—1·70; Maximum—3·20; S.D.—0·36; S.E.—0·05

The serum magnesium in normal pregnant women lies between 1·70 to 3·20 mg., with a mean of $2·41 \pm 0·36$ mg. per cent. The serum magnesium approximates very well with figures obtained with normal subjects. Statistical analysis gives a value of $P<0·8$ which indicates that the values of serum magnesium of normal subjects does not significantly differ from those of pregnant women.

Having seen that normal pregnancy does not materially alter the serum level, the serum magnesium was estimated in 31 cases of eclampsia. The results are summarised in Table 3.

TABLE 3—SHOWING SERUM MAGNESIUM VALUE IN CASES OF ECLAMPSIA

Case No.	Serum magnesium (mg./100 ml.)	Case No.	Serum magnesium (mg./100 ml.)
1	0·75	17	0·90
2	2·20	18	0·80
3	1·50	19	0·61
4	2·20	20	0·52
5	1·30	21	0·49
6	0·30	22	0·46
7	1·05	23	0·50
8	1·45	24	0·50
9	0·50	25	1·00
10	1·20	26	1·00
11	1·00	27	1·00
12	0·80	28	1·20
13	0·50	29	2·20
14	1·00	30	1·00
15	0·81	31	1·20
16	0·79		

Mean—0·99; Minimum—0·30; Maximum—2·20; S.D.—0·49; S.E.—0·09

On analysis of serum magnesium level in 31 cases of eclampsia, it is seen that there is definite reduction in serum magnesium in eclampsia. This is a very significant finding.

The values in cases of eclampsia lie between 0·30 and 2·20 mg. per cent, with an average of $0·99 \pm 0·49$ mg. per 100 ml. of serum. This shows marked reduction of serum magnesium in cases of eclampsia as compared to normal pregnant women. The statistical analysis of results show that the reduction in serum magnesium in cases of eclampsia is significant at even 1 per cent level.

TABLE 4—SHOWING SERUM MAGNESIUM VALUE IN CASES OF CANCER CERVIX

Case No.	Serum magnesium (mg./100 ml.)	Case No.	Serum magnesium (mg./100 ml.)
1	2·00	11	2·10
2	3·80	12	3·00
3	0·50	13	1·15
4	2·08	14	1·05
5	1·00	15	0·70
6	0·49	16	1·24
7	1·00	17	0·61
8	1·98	18	0·61
9	2·30	19	1·25
10	2·02		

Mean—1·52; Minimum—0·50; Maximum—3·80; S.D.—0·52; S.E.—0·21

In a series of 19 established cases of cancer cervix, estimation of serum magnesium was undertaken. The results are shown in Table 4. Here also the serum magnesium level has been found reduced. The statistical analysis shows ($P>0·01$) that reduction is significant.

DISCUSSION

Various methods have been used from time to time for the estimation of serum magnesium, such as colorimetric, bromination, etc. The precipitating agents have been phosphate and hydroxyquinoline respectively. Hirschfelder and Haury (1938) used Titan yellow as the precipitating agent which is now considered as the most accurate method of estimation (Orange and Rhein, 1951). Our range of values (Table 1) has been within the same range as was found by workers like Hirschfelder and Haury (1958), Haury (1940), Haury and Cantarow (1942).

The serum magnesium value in normal pregnancy is within normal limits of variation. But in cases of toxaemia it is markedly diminished, being $0·99 \pm 0·49$ mg. per cent only. Haury and Cantarow (1942) studied only 8 cases of toxaemia of pregnancy. The clinical details of all these cases are not available. But one of their cases who had

severe convulsions had a serum magnesium level below 1·0 mg. per cent. Another 2 cases had also values between 1·0 and 1·20 mg. per cent. In our cases all the patients had severe convulsions and most of them responded well to intravenous injections of magnesium sulphate. Thus a condition of hypomagnesaemia is highly probable in cases of toxaemia of pregnancy. Our results, while being in conformity with those of Haury and Cantarow, are at variance with those of Nayar ((1940) who showed no change in the serum magnesium level in eclampsia. Hypomagnesaemia has been shown by a large number of workers to be a concomitant finding in eclampsia—whether this hypomagnesaemia is the cause or effect of convulsions has yet to be established.

Though the range of serum magnesium value in cases of carcinoma of cervix is wider than normal in our cases, the average of 1·52±0·91 mg. per cent is much below the normal average of 2·33 mg. per cent. Whether dietary deficiency is responsible in the above two pathological conditions is not established. Whether this hypomagnesaemia in cases of eclampsia is the cause or it is the effect, is difficult to surmise. But metabolic studies of magnesium open up a new way of approach to the problems of cancer and eclampsia.

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MENTAL EFFECTS OF LIGATION AND OTHER STERILISATION OPERATIONS

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INTRODUCTION

Ligation operation is the tying of the fallopian tubes as a means of sterilisation of women. It has become more and more popular during the last forty years. In the beginning it was not popular. The majority of the parents, burdened with about a dozen children, did not know how to stop the abnormal growth of the family. Only a few people knew the use of contraceptives like condoms, but a good majority of them did not like the contraceptives because they interfere with the sexual pleasure, especially in the male partner. When the ligation operation was introduced it was accepted as a boon because it stopped further growth of the family without interfering with the pleasure of the sex act.

Obstetricians were the first to advocate the operation as a means of sterilisation. Among the laity there was general aversion to the operation so much so that when one of the clerks of a medical college agreed to have the operation done on his wife the professor of obstetrics showed his enthusiasm by bringing the gentleman to his class and praising him most heartily in front of the students. The acceptance of the operation was a very gradual process and the greatest obstacle to it was the belief that children are born only by the will of God and man has no right to stop what God wishes. This belief was gradually shaken when parents had to face the hard realities of life, when many of them found that they could not rear properly the children they had begotten. Many of them could not even keep their children alive either due to poverty or due to deterioration of their own health.

The idea of limiting the family to one, two or three children has been accepted by the intelligent and educated section of the population. The family planning programme which is favoured by Government has the same object in view. This has become a necessity in view of the enormous increase in our population. During the last three decades the population of India has increased at the following rates: From 1921 to 1931—11 per cent, from 1931 to 1941—13·5 per cent and from 1941 to 1951—14·1 per cent. If the population goes on increasing at this rate there is sure to be

a disaster in course of the next 30 years. The object of family planning is to keep down the growth of the population. The ligation operation is advocated as one of the safest and easiest method of permanent sterilisation and as a means of keeping the population in check.

Mental Effects on the Woman

Ligation operation is not an unmixed blessing. Its ill effects are mainly psychological. When we are impressed by the physical aspect of the operation, we often fail to notice the psychological side. This is due to the fact that the physical effect is immediate and impressive and is apt to lead a casual observer astray. The enthusiastic professor of obstetrics who brought the poor clerk to his class and praised him in front of his students for agreeing to submit his wife to the operation did not consider it necessary to ask the opinion of the wife who was going to be operated on, as if it is such a blessing for a woman who has had several children that she cannot have any reasonable objection to it.

Asking the consent of the wife is not all, because our conscious mind forms only a small part of the whole mind and a far greater portion is the unconscious. The unconscious mind may have and often has an opinion of its own which is entirely different from that of the conscious. The conscious mind of a woman who has had the trouble of bearing and rearing several children will naturally not welcome any more additions. The unconscious mind is full of instincts and the parental instinct will long for more children in spite of all the troubles and difficulties of having many.

Lt.-Col. Berkley Hill, the far-sighted pioneer psychiatrist of India, could see the far-reaching effects of this operation and said more than 20 years ago that though a woman who is the mother of several children might assert with the whole strength of her conscious mind that she did not want any more children it was never the word of her inner mind which greatly resented a radical operation like ligation. Such women usually develop mental disease in course of time. There are no statistics showing how many of the ligated women develop mental disease. It seems to me that about one-third of the women operated suffer. The victim soon realises that she cannot have any more children by any means throughout the rest of her life. This gives the death blow to her instinctive parental desire to have more children, and acts as a major frustration in life which many women cannot tolerate. In them it leads to mental disorder of the nature of depression. The depression is not necessarily related to the frustration. In many cases the patient believes that her husband or her existing children are going to suffer disease or death. Delusion of jealousy is also a common symptom. There is no fixed rule as to how long after the operation the symptoms may appear. In most of my cases the time interval varied between 2 and 6 years. It seems this is the time required for the unconscious instinctive wishes to come up and occupy the whole mind. When the whole mind is occupied by the unconscious wish the conscious mind loses its reality sense and the person becomes psychotic.

All women who are ligated do not suffer from psychosis. Those who have a psychotic background are the persons who suffer. The occurrence of pregnancy insanity or puerperal insanity is regarded as an indication for ligation operation with the idea that removal of the chances of further pregnancy will also remove the chance of pregnancy insanity or puerperal insanity. But unfortunately these are the persons who are particularly liable to suffer from psychosis as a result of ligation. So one must be very cautious in advising ligation in such cases.

Women who suffer from the psychic effects of ligation and other sterilisation operations can be divided into four categories:

1. *Women with no family history of mental disease and no history of any personal attack previous to the operation*—The number of such persons is comparatively few and they form a small percentage of the operated cases. They are again divisible into two groups:

(a) Younger persons—They usually have increase of sex desire with delusion of jealousy and persecution and some amount of depression.

(b) Elderly persons—They almost invariably have symptoms of involutional depression, and the operation acts only as a precipitating factor of involutional depression.

2. *Women with positive family history of mental disease but no history of previous personal attack*—They suffer from depression and delusion of persecution and sometimes also of jealousy.

3. *Women with history of previous hysterical attacks*—They usually have acute exacerbation of hysterical symptoms specially of conversion type.

4. *Women with history of attacks of psychosis previous to operation*—The number of such patients is high and they form a large percentage of the operated cases. They have all sorts of psychotic symptoms, viz., depression with suicidal attempts, delusions of persecution, poisoning and jealousy.

The following are some examples, one from each group.

Case Reports

Case 1—A.G., Hindu female, aged 33. She has no family history of mental disease nor any history of attack of psychosis previous to her operation. She is the mother of 6 children. The last child was born in 1955 when she was ligated. Symptoms began early in 1960.

There is a funny story connected with the beginning of her symptoms. She was introduced by her brother to a tantrik sadhu who worshipped the Goddess Kali in places of cremation of dead bodies. At first she became very religious-minded and began to worship gods and goddesses almost all day. Then she could not tolerate the husband's sister in her house. This dislike for her sister-in-law grew from delusion of jealousy and she told her husband one day : "All right, if you love your sister so much you live with her in your house and I go somewhere else." She actually began to spend most of her time in the house of a neighbour. She had sex desire towards men other than her husband. This she expressed in a peculiar way. She said : "I see the shadow of my husband in the body of other men (including the two male members of the neighbouring house in which she spent most of her time)." Her sex desire did not spare even boys of 10 years. She projected the blame on others. When her sister-in-law had to go away from her house she left behind her son who was aged 10 years. The patient said : "The witch has gone home but has left her son here to become my husband".

Case 2—S.D., aged about 50, seen first on 3-8-60. She was the 1st of 6 sibs. There was no family history of mental disease except that a daughter of her maternal aunt was epileptic and mentally deficient.

She is the mother of 4 children, all grown up. She had hysterectomy done for menorrhagia in October 1959. Symptoms began soon after the operation and progressively worsened during the month preceding the visit.

She repeats everything many times. She cannot attend to her household duties, is always morose and nothing delights her. She cannot sleep at night, specially during the small hours of the morning. Her main complaint is that she does not feel the natural love and affection for her children, as if she has lost all love and affection.

Case 3—P.C., aged 30, was the 9th of her 14 sibs, though only 4th of her living sibs at the time of her birth. Her mother suffered from mental trouble for about 15 years. Her elder sister had occasional attacks of mental trouble. Her second brother while a college student had mental trouble with morbid fear of being murdered and ultimately committed suicide.

Soon after her marriage at the age of 16 she had 3 issues at intervals of 2 years and she began to use contraceptives after that. Contraceptives ultimately failed and she had her 4th issue 5 years after the 3rd. She was ligated at the same time (1955). In 1959 there was a planned opposition against her husband, and she was much perturbed for the safety of her husband. Within a short time the husband was transferred and everything was all right.

Mental trouble began in the early morning of 1st January, 1960 when she was apprehensive of an unfounded conspiracy against her husband. She could not sleep well the previous night. On the next day she thought that others were aggrieved because of her conduct towards them and she begged apology of them. The next day the symptoms grew much worse, she was apprehensive about the safety of her children and husband, and showed a tendency to commit suicide.

Case 4—P.D.J., aged 34, mother of six children, one of whom died immediately after birth. The last child was born 9 years ago when she was ligated. She was married at the age of 16 and began to have hysterical fits soon after. The fits were cured with the birth of children.

Recently she complained of severe pain on the left side of her chest which came in clock-like every afternoon and was so severe as to make her cry. All sorts of investigations were done without finding any organic cause. It appears to be an acute exacerbation of old hysterical symptoms which had disappeared with the birth of her children, and have reappeared with a vengeance where there was no hope of any further childbirth.

Case 5—M.D., aged 34, was married at the age of 13. She had her 1st child at the age of 18. The 3rd child was born at the age of 24 when she had the 1st attack of mental illness.

She had six children in all. The sixth was born at the age of 30 when she was ligated. Symptoms appeared again the next year.

Mental Effects on the Husband

Delusion of jealousy is a very common thing among married people. In the mildest form it is present in almost every married person howsoever normal he or she may be in other respects. In this mild form it is not a delusion in the strict sense of the term because it is not irremovable. Rather it is just a flickering suspicion of jealousy which occurs in the mind of a married man when he finds his wife talking to or laughing with another man. Though this temporary suspicion is of a very minor degree it is of the same kind and quality as a delusion, and there are all grades between this mild form and a full-fledged delusion. Just as there is wide variation in the intensity of this delusion there is variation in the incidence also. It has been mentioned that in the mildest form it is almost universal. Real delusion of jealousy is rare among the general population. Though there is no statistics it seems to be common among the husbands of ligated women. It is particularly more common where the husband is of unstable mind from beforehand though he may not have anything like delusion of jealousy before the operation of ligation on his wife.

The mechanism is like this. Most men are polygynous, i.e., they have in their mind a desire

to have sex relation with many women. Such a desire usually occupies their mind at times, but is suppressed for sociological reason. A husband with such a mind will suspect that his wife also is polyandrous, i.e., she has the desire to have sex relation with many men. When ligation is done on a woman the husband has a tendency to think, now that there is no chance of pregnancy the wife is more free to satisfy her sex desire with any man. All these thoughts pass through the unconscious mind of the husband though in the conscious mind he may not admit them.

Case Reports

Case 6—A man aged 42, married twenty years ago and father of 6 children had the ligation operation done on his wife 6 years back just after the birth of her last child. He had been neurotic since 1941. During the last one year he had developed delusion of jealousy. His behaviour showed it clearly, but he had a peculiar way of expressing it. He said: "I love my wife cordially but she thinks that I suspect her character." While at home he would often go into this room and that, including the kitchen and bathroom to see if his wife was there or what she was doing there. While out, he would ring up his home to see if his wife was there or not and on returning home he would enquire of every person in the house including his children whether his wife had all along been at home or had been out. He improvised ingenious ways of detecting the footprints of any person coming into his house. He would tell all sorts of lies to evade his idea that he suspects his wife's character. In his own way he would try to keep his wife satisfied by having sex relation with her in time and out of time, and taking her in a taxi to restaurants though she did not like either of these things.

Case 7—D.N. was short-tempered from his boyhood. He would lose temper easily and would abuse his mother, brother or sister on the slightest pretext. He was hypersexed from before his marriage. He visited prostitutes many a time before his marriage and apologised for that to his wife after marriage. He was mentally ill six months after the birth of his second child. When he had strong fear and sense of guilt, he would tell almost every person he met that he had committed great offence and would ask pardon of every body. He also had delusion of reference at that time. He was well for a year after treatment, and then gradually developed delusion of persecution. His wife arranged for ligation after the birth of the next child. He gave his consent but when she was admitted into a hospital for the operation he changed his mind, and said that Lord Siva himself would come as his next child.

After the ligation of his wife his sex appetite increased enormously. He would not spare his wife any time of the day or night. Whenever the wife objected on the ground of her ill health, he would chastise her as having a bad character. He would not hesitate to drag his wife from the company of other women for sexual purpose. At the beginning there was a sense of shame when he assaulted his wife, but later on that also was lost.

Conclusion

There is no doubt that family planning is good for the society and for the country. But great caution should be used in advising sterilisation operation like ligation, hysterectomy, etc., because of the untoward effect on the woman and her husband. In this respect other methods of contraception are far better than such radical operations.

PRACTITIONERS' SERIES

TREATMENT OF 'FEVERS' DURING PREGNANCY

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Now that antenatal care of expectant mothers is fast getting popular the general practitioner is not usually called upon to treat a pregnant patient who may be suffering from headache, anorexia, and pain in the body, associated with a rise of temperature of varying degrees. The antenatal department attached to maternity or general hospitals is not always in charge of a general practitioner. In this country the general practitioner is generally finding himself in a position where he is not asked to accept the responsibility for treatment, but is often consulted for recommending a specialist for the particular complaints of the patient and also for carrying out the instructions given by the specialist. This is a very unfortunate state of affairs. In every country of the world and also in ours about ten or fifteen years back, the general practitioner has been the mainstay of the profession. The public should be made to realise that for treatment of most of the medical complaints the general practitioner has been adequately trained and does possess the requisite ability and skill.

It will be the purpose of the present article to bring before our medical colleagues the principles of treatment of a pregnant patient complaining of 'fever' as the main symptom.

In the beginning it has to be realised that most 'fevers' so far as their causation, symptoms and complications are concerned, have no special features in the pregnant woman. In other words, these cases need not be treated in any way different from what is followed in non-pregnant adult

females or even in males. There are however, certain causes which result from the pregnant condition and have to be treated according to the special aetiological conception.

The causes of 'fever' commonly found in this country are (1) the exanthemata, (2) catarrhal conditions of the nasal and respiratory passages, the common cold and the so-called 'influenza', the loosely defined 'pneumonias', etc. (3) infections through the intestines, e.g., typhoid fevers and dysenteries, (4) cerebrospinal meningitis—viral infections, (5) so-called septic fevers—associated with furuncles, abscesses ; surgical injuries, and accidents. The above grouping will help the practitioner in determining the line of special treatment he will adopt irrespective of the fact as to whether his patient is an adult man or a woman and if a woman whether she is pregnant or not. Besides the adoption of the curative treatment there are certain special features which deserve careful attention from the doctor. These are discussed below.

In the case of the exanthemata, speaking generally, they are self-limited diseases in the sense that no specific remedies are known to anticipate and minimise the excursions and the duration of the rise of temperature. But the discomfort and ailments associated with the 'fever' must be carefully treated. Non-opiate sedatives, barbiturates or non-barbiturates, must be fully exhibited. If too much attention is directed to the patient's complaint of nausea, drugs given parenterally may be exhibited. As a rule, this procedure is not to be encouraged. Many drugs are tolerated by the mouth. The old adage of "starving a fever and feeding a cold" should be expunged from a modern practitioner's code of guidance. A pregnant patient's nutrition is very important. The most important thing to comprehend is that the complications of exanthemata during the period of gestation, viz. foetal abnormalities and deaths, are comparatively common. We have no means to prevent them. The medical attendant should make a special note of it and pass on the information to the accoucheur at the time of labour.

In connection with the second group of cases, ordinarily speaking, either the sulphonamide group of drugs or the antibiotics are usually prescribed and the treatment is successful in most cases. In a case of common cold, the antibiotic is often prescribed in small doses with apparently good result. As a rule most 'common colds' do not need any treatment with antibiotics. On the other hand, small doses of antibiotics may jeopardise the patient's capacity to fight more virulent infections that may attack her in times to come. Streptomycin is one of these antibiotics which demand careful consideration before exhibition. Very often infections of the respiratory passage are associated with troublesome cough, retching and vomiting, which mechanically may cause accidents, viz., early rupture of membranes or miscarriage, etc. It would be necessary to alleviate the troublesome cough without interfering with the expectoration of mucus from the respiratory passages. Various antiallergic drugs prescribed in syrupy excipients are often useful. When the lung fields are found seriously affected causing hurried breathing, which is an early indication of deficient oxygenation, oxygen inhalation should be arranged fairly early. An adult can stand asphyxiation to some extent, but the intrauterine foetus must have its full quota of oxygen. A pregnant patient's oxygen intake should always be at the maximum level.

The modern treatment of enteric infections consists of specific antibiotics and suitable provision for the maintenance of nutrition with well regulated diet. In connection with the pregnant condition two special features have always to be remembered. One is the tendency for the haemopoietic system of the pregnant woman to be affected by antibiotics like chloramphenicol or the broad spectrum synthetic drugs. The other is the tendency of deficient absorption of vitamin B components in the pregnant woman. Routine treatment of enteric infections after the temperature has been controlled should include antianaemic measures and provision for the supply of vitamin B complex. One common manifestation of deficiency of vitamin B absorption is the appearance of cramps in any part of the body. If this appears niacinamide should at once be prescribed. After the successful treatment of bacillary dysentery with antibiotics, symptoms of tenesmus, small and frequent evacuations of mucous and blood-stained debris indicate a mixed infection in the bowel. The slowly absorbed sulphonamides in heavy doses are indicated. Frequent tenesmus may start uterine contractions ending in premature labour.

If the pregnant patient is a victim of cerebrospinal meningitis or of one of the viral infections about which our knowledge is still limited, her life is in danger. The pregnant condition does not present any special feature during the few days of busy and anxious treatment. The patient should however be removed to such a surrounding as permits adequate treatment of a sudden evacuation of the contents of the uterus. Without providing for such an eventuality the last flicker in the dying lamp of life of a carefully treated convalescent patient may suddenly be extinguished. Some of these dangerous affections leave behind permanent complications in the shape

of palsies or paralyses. Fortunately, where the patient survives such a disease the plain muscles are not usually affected. The uterus, at term, behaves normally and so normal labour can justifiably be expected.

In the last group of cases, there are no special features worth remembering in case of a pregnant patient. If the accident or injury affects the reproductive passages, internal or external, the exigencies of labour must, of course, be provided for.

The causes of fever which are not only associated with the pregnant condition but are also caused by the gravid uterus are now discussed. The increasing size of the uterus and its ascent from the pelvis into the general abdominal cavity, causes certain alterations not only in the positions of the abdominal viscera but also causes actual pressure on some of them. The ureters on both sides, but particularly on the right side, are likely to be pressed upon by the growing uterus. The pressure is very slow and gradual. The interference of urinary flow from the renal pelvis to the vesical cavity causes a certain amount of retention in the former. Due to this mechanical factor and also due to many other factors interfering with excretions from the bowels a pyelitis, evidenced by fever coming with rigors and associated with renal pain, results. If the urine is examined, in most cases there will be detected excess of pus cells in the microscopic slide of the centrifuged urinary deposits. On culture, it is not unusual to get a pure growth of one of the various strains of *E. coli*. These cases are usually successfully treated with massive doses of alkalis and sulphonamides. It is a safe practice to prescribe a combination of sulphonamides with different chemical structures. This precaution is necessary to prevent crystalluria and the possibility of mechanical anuria. The sulphonamides should be continued patiently at least for a week. A sudden change to streptomycin or other broad spectrum antibiotics is not without subsequent danger to the patient.

Intestinal infestation with the helminths often produces slow rise of temperature. This is accompanied with malaise, loss of weight and anaemia which often simulate tuberculosis of the lungs or of the intestines. The stools have to be examined repeatedly. Whenever any parasite or ova are found in the stools, suitable treatment must at once be adopted. It is very gratifying to note that modern anthelmintic drugs, such as hexylresorcinol combined with pyrethrum bases are well tolerated by patients. No brisk purging or starvation is required.

Retention of products of conception after a missed abortion, as also the presence of a dead foetus before term, cause rise of temperature with or without rigor. In such cases, the biological test of pregnancy is almost always definitely negative. The judicious evacuation of the contents of the uterus will bring the temperature down without the necessity of using antipyretic drugs.

A pregnant patient may be a victim of tuberculosis of the lungs. She may have chronically infected tonsils with such complications as rheumatic affections, endocardial defects, chorea, etc. The treatment of this condition is in no way different from that of a person who is not pregnant. In cases of tuberculous affection of the lungs the temperature comes down much more quickly and the condition improves with the increase in the period of gestation. A crisis does, however, threaten during labour and the puerperium. The use of hormones in the pregnant woman should be cautiously advised. Cortical hormones, as in the treatment of rheumatoid arthritis in the pregnant person, is not altogether safe. Tonsils causing fever or teeth with apical abscesses or gum boils should be removed, if necessary, for pregnancy is no bar to such procedures.

Whatever has been mentioned in this article may have the semblance of didactic assertions. They have been so because the object is to recount things for the guidance of a general practitioner who may have to face matters dealing with the so-called specialities. Statements have been made which may form suitable points for discussion or may raise questions about clarification. These will naturally be welcome. If, however, the practitioner finds it of some use, as helping him with ready guidance, the object of this article will be amply achieved.

SPECIAL ARTICLE

MEDICOLEGAL ASPECTS OF EYE INJURIES

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During the twelve years of medicolegal experience, the writer had come across a number of cases of injuries where the condition had been labelled as 'simple' in the medicolegal report (according to the definition of the Indian Penal Code) when the subject had suffered marked diminution of vision even to the extent of perception and projection of light or finger counting. In a few cases, the vision was normal just after the injury and was declared 'simple', but subsequently

TABLE 1—SHOWING RESULTS OF TREATMENT OF INJURIES TO THE EYES

Sl. No.	Structures involved	Type of injury and No. of cases	Vision on admission	Vision after treatment
1.	Cornea ...	Perforating ... 17 Blunt ... 3	P.L. & P.R. present in all the 20 cases	4 cases recovered vision ranging from 6/36 to 6/9 16 cases had no improvement of vision
2.	Forehead ...	Blunt ... 1	P.L. & P.R. present	6/36 with glasses
3.	Eyeball ...	Blunt ... 24	17 cases—P.L. & P.R. present	6 recovered vision ranging from 6/60 to 6/9
			3 cases—Blind	One case recovered vision to F.C. at 2 metres
			3 cases—6/60 to 6/36	Improvement of vision ranging from 6/9 to 6/6
			1 case (child *aet.* 4 years)—Vision not recorded	
4.	Lids and orbit ...	Lacerated and blunt (2 lids, 1 orbit) ... 3	Vision not affected all along	
5.	Lens ...	Blunt ... 1	P.L. & P.R. present	6/60 after operation
6.	Temporal region ...	Blunt ... 1	6/60 each eye	6/6 each eye
7.	Macula ...	Blunt ... 4	P.L., P.R. & F.C. at 1 metre distance	Vision recovered ranging from 6/9 to 6/6 in a month's time

it deteriorated progressively to the extent of finger counting in the course of from a few weeks to a few months. In others, where the vision was almost lost just after the injury, there was an improvement or even complete recovery in the course of a few months. This wide variation in the findings induced the writer to study the injuries of the eye in more detail from a medicolegal point of view.

In this series, 54 cases of eye injuries of various types have been studied. Most of the material has been collected from the department of ophthalmology, S. N. Hospital, Agra.

The cases studied were grouped under seven heads depending upon the structure of the eye involved (Table 1).

1. *Corneal injury*—20 cases (perforating injury 17, blunt injury 3) were studied. On first examination, all the cases had only perception and projection of light. 16 cases did not recover vision at all, while 4 cases had their vision improved, ranging from 6/36 to 6/9.

2. *Forehead injury*—One case was studied in which only P.L. and P.R. were present. The nature of injury was blunt. The patient recovered vision to 6/36 with glasses.

3. *Eyeball injury*—24 cases of blunt injuries were studied. 17 cases had only P.L. and P.R. ; 3 cases had vision ranging from 6/60 to 6/36 ; in one case (a child aged 4) the vision was not recorded and 3 cases were completely blind, i.e., where not even P.L. and P.R. were present. In the group of patients who had only P.L. and P.R., 6 recovered vision ranging from 6/60 to 6/9. The patients whose vision was 6/60 to 6/36 improved, with vision ranging from 6/9 to 6/6. Out of 3 cases who had no P.L. and P.R., only one case could count fingers at 2 metre distance. The two others were stone-blind.

4. *Lids and orbital injury*—2 cases of injury to eyelids and one case of orbital injury were studied. Their vision was not at all affected by the injury.

5. *Lens injury*—One case was studied. He had only P.L. and P.R. present. His vision improved to 6/60 without glasses, and 6/9 with glasses after operation.

6. *Temporal region injury*—One case was studied. His vision was 6/60 in each eye after injury, but it recovered to 6/6 in both eyes after treatment.

7. *Macular injuries*—4 cases were studied. On first examination they had only finger counting at one metre distance. After nearly 8-10 weeks, every one of them recovered vision ranging from 6/9 to 6/6 (Table 1).

DISCUSSION

In the 54 cases of eye injuries studied, 3 had normal vision ; 3 were stone-blind and the rest had only P.L. and P.R. present at the time of first examination after the injury. Out of the 50 cases (3 cases with injuries to lids and orbit and a child aged 4 were excluded), 32 cases showed im-

provement in their vision but 18 cases showed no improvement at all. Out of the 32 cases showing improvement in their vision, 18 cases improved to such an extent that they were able to carry on their routine work.

According to the Indian law, out of this series of 54 cases, only three cases who were stone-blind could be classed under 'grievous' injury, and the rest as cases of 'simple' injury. The writer is of opinion that besides those three cases of stone-blindness, the following categories of injuries should also be classified under 'grievous' injuries as the eye is an organ in which the result of an injury should be considered in the light of the vision which it possesses.

(*a*) 15 cases who had only P.L. and P.R. present at the time of injury and had no improvement in their vision after treatment.

(*b*) 14 cases, most of whom had only P.L. and P.R., and who showed some improvement in their vision after treatment, but not enough for carrying on normal pursuits.

Furthermore, 18 cases where the vision present varied from P.L. and P.R. to 6/60 at the time of injury, and who showed improvement in their vision to an extent that they were able to carry on their daily routine work, should have been labelled as *'simple' injury* in addition to those three cases of lids and orbital injury where the vision was normal all along.

According to the Indian Penal Code (Section 320), only the permanent privation of the sight of either eye would constitute a 'grievous' injury (which would mean stone-blindness, i.e., even P.L. and P.R. absent). In English law there is no such classification of injuries as 'simple', 'grievous' or 'dangerous'. The various injuries have been covered by the term 'wound' or any 'grievous bodily harm'. The Act does not contain any definition of 'wound' or 'grievous bodily harm'. It has been held that to constitute a wound there should be a breach in the natural continuity of any of the tissues of the living body. Further, the term 'grievous bodily harm' is presumed to be an injury which seriously interferes with the health or comfort of the victim, and need not be either permanent or dangerous. It appears that the decision regarding the nature of injury for purposes of awarding punishment, has been left to the court of law. In India, the Act has provided only permanent privation of the sight of either eye to constitute a 'grievous' injury. Vision affected even to a lesser degree than permanent privation of the sight does seriously interfere with the comforts of the injured and in following his normal routine, but this would not comprise a 'grievous' injury according to the Indian law while it would be covered under the English law as 'grievous bodily harm'.

In the writer's opinion, the Indian law is faulty in this respect and needs amendments. The following amendments are suggested:

> "Permanent privation or diminution of sight of either eye to an extent which would seriously interfere with the comfort of the patient or in the discharge of his normal daily pursuits" should constitute a 'grievous' injury.

The eye is a very delicate organ, and some of its structures once injured do not regenerate.

(a) A central corneal injury which may be very mild, leaves behind a central corneal opacity which reduces vision to a great extent and fine work cannot be carried out.

(b) Injuries on the iris, with the sphincter muscle torn, causes permanent dilatation of the pupil, though the vision may be 6/6. The patient is unable to regulate light and is unable to do any close work, because the pupil is permanently dilated. Such an injury does not reduce vision but for an office worker such an eye is useless. Such injuries should be labelled as 'grievous' injuries.

(c) The insult inflicted on the lens always produces cataract. There is an immediate loss of vision; but after proper operation, the vision is restored to normal and the patient is able to carry out his daily routine work. Such injuries should not be labelled as 'grievous'.

(d) In vitreous haemorrhages, on the first day of examination, there is a complete loss of vision; but as time goes on the vision recovers and the patient is able to carry on with his normal duty. These patients take much longer time than 21 days to get the normal vision.

(e) Injuries which produce retinal detachment —After operation, most of them do not show satisfactory recovery of vision, except in 40 per cent of the cases where the detachment is small and is at the lower part of the periphery.

(f) In the case of macular injuries, the prognosis is very difficult to assess. When the patient is first seen, the vision is very poor. After some time, in certain cases, the vision recovers to normal range. In other cases, the vision may not return to normal. In this series, all the four cases of macular injury recovered their vision. Such happy results do not occur in all cases of macular injuries, and some cases do not recover vision at all.

(g) As regards the injuries of the optic nerve there is no patient in our series. The writer has

known two patients who came for examination after a blunt injury. Their vision was 6/6 and later on within 3 months, they developed optic atrophy and their vision was reduced to less than 6/60. These cases did not turn up again, so follow-up study was not possible.

Conclusions

1. The definition of 'grievous' injuries as defined under the Indian Penal Code (Section 320) is faulty and the following suggestions are made for amendment:

(a) "Permanent privation or diminution of sight of either eye to an extent which would seriously interfere with the comfort of the patient or in the discharge of his normal daily pursuits," should constitute a 'grievous' injury under the Law, or

(b) The term 'grievous' injury should remain undefined as it is in the English Law.

2. The vision noted on first examination may not be a permanent change and may show improvement during the course of treatment. Some cases may show normal vision soon after the injury, but it may deteriorate in course of a few weeks. Hence it is very difficult to assess the result of eye injury at the first instance. The case should be followed for at least three months before giving a final medicolegal report regarding the nature of the injury.

3. Cases of eye injury may on external examination appear as normal to the general medical practitioner, though there may be some deep-seated injury to the eye. Hence, an ophthalmic surgeon should always be consulted before expressing any opinion on the injury to the eye, even in the absence of positive findings on external examination.

Summary

A study of 54 cases has been discussed regarding the nature of injury to the eye and the medicolegal aspect of such injuries.

Acknowledgment

I am greatly indebted to Dr. P. Avasthy for making the records available to me and for his valuable expert help, without which this study could not have been completed.

In Workmen's Compensation Act, in the event of the loss of an eye the person gets a compensation equal to 30 per cent, and in loss of both eyes the compensation is 100 per cent. So the serious injury to an eye should be considered as 'grievous' injury as the writer suggests.—Ed., *J. Indian M. A.*

PUBLIC HEALTH

FUNCTION OF A MEDICAL OFFICER IN AN INDUSTRIAL ORGANISATION

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With the transition from agrarian to industrial economy, the health of a worker has got to be protected. The Constitution of the Republic of India (Article 43) also provides that "The States shall endeavour to secure by suitable legislation or economic organisation or in any other way, all workers, agricultural, industrial or otherwise, work, a living wage, conditions of work ensuring a decent standard of life and full enjoyment of leisure and social and cultural opportunities and in particular, the States shall endeavour to promote cottage industries on individual or co-operative basis in rural areas". Allthough the above is only a directive principle it envisages a good health programme for workers either agricultural or industrial in the country. This obviously necessitates a good industrial health programme.

Unfortunately, the functions of medical officers in industry are very restricted and often consists only of treating the workers and issuing certificates of illness recommending leave. As provided in the Constitution and emphasised in the second five-year plan, a modern industry should have a well-organised medical department under a qualified and experienced medical officer. The trade union movement may have resulted in higher wages, but without planned and skilled medical supervision workers' health standards would remain as low as before. Increased wages only do not connote a lowered incidence of venereal diseases, tuberculosis, cancer, dermatitis, occupational injury or a better maintenance of worker's hearing, vision, intelligence, skill, etc.

In achieving these objectives a good industrial medical officer naturally can do much with the active co-operation of the employer. With the rapid development of industry in this country and the evolution of a welfare pattern of society, the management of industries must take an increasing share in the medical welfare of the workers within and outside the factory.

Generally, modern industry can be divided into the following departments, under the overall supervision of a factory manager.

1. Personnel department.
2. Production department, under which comes the engineering section including safety engineering.

3. Marketing department or sales department.
4. Labour and welfare department, with which the medical department is integrated.

After the introduction of the Employees State Insurance Scheme, the treatment side and certification have been taken over by panel doctors in some areas. However, these represent only a minor part (curative) of the functions of an industrial medical officer. He is still as essential as before since the health promotion and preventive aspect still depend entirely upon him.

Necessity of a Separate Medical Department in Industry

A qualified expert in industrial medicine should be consulted from the planning stages of the industry, particularly for selection of the site. A wrong selection (e.g. choice of a malarious site) may result in high incidence of illness and the resultant loss of valuable man-hours and production. The medical officer will also advise the industry about prevention of diseases prevailing there. If, imported labour is recruited, their susceptibility to various local diseases should be considered. For example, the north Indians and hillmen generally suffer from eosinophilia of the lungs or from pulmonary tuberculosis respectively and so would be unsuitable for the fibre industries, like jute, etc., or silica industries which cause irritation of the lungs leading to fibrosis and consequent predisposition to tuberculosis. For people coming from the filarious districts of Orissa, active infective cases should be screened out during pre-employment medical examination, thus rejecting unhealthy workers who apart from infecting others will ultimately slow down production.

At the time of the erection of the factory building, the medical officer can advise the management regarding ventilation, lighting and also in building and the layout of the workers' colony. In all factories it has to be seen that proper natural lighting is provided on the floor space and no glare is formed. Where it is not possible, artificial lighting should be maintained so that no shadow is formed and there is no strain to the eyes.

Specific types of work require specific types of lighting. The British Illuminating Society has laid down a standard specification to this effect. Accidents commonly occur due to too much or too little illumination or due to unsuitable reflecting property of the walls of the room. So the normal illumination of a factory should be direct illumination. The British standard requires that the intensity of the object should be ten times the illumination of the background (the desirable contrast). But people can accommodate up to 100 : 1 for short period only. As too much contrast may lead to accident, shadowless lighting is good in industry. No bulb should project within the angle of vision. For this purpose fluorescent light is recommended.

Regarding ventilation, cross ventilation should be maintained. Where this is not practicable, ventilation should be maintained by a balanced type of ventilation. The velocity of air should be 40-60 ft./min. Adequate floor space (50 sq. ft. per worker) should be maintained, since limited floor space favours the spread of droplet infection.

Temperature within the factory should not be allowed to be very high. In some industries, as in jute and cotton (spinning), work is carried out in humid condition. Evaporation from the body is usually less and thus there is more fatigue in the worker, resulting in emaciation and loss of appetite. In such cases, the medical officer should, advise against such humid working condition, and recommend fewer hours of duty and proper type of food, viz., carbohydrate and salt as the case may be.

Pre-employment examination—Bearing in mind the economic condition of the country, practically all adults above 18 years should be considered eligible for entry into work. In the pre-employment examination, one should try to ensure certain minimum standards: (1) the height (5 ft), (2) the weight (100 lb.), (3) no physical deformities or disablements, (4) no cardiopulmonary defects, (5) no defect in vision and hearing and (6) freedom from worm infestation.

Hernia should be looked for in manual workers. Particular types of work may require some special consideration, e.g., a man who has to work in a furnace should be of good muscular build.

Preplacement—Industrial psychology should be utilised to find out suitable ways and means to ensure maximum utilisation of workers' interest. Uptil now, industry has greatly neglected the human factor and has given greater stress on the machine. But today we have to think in a different way. The management must realise the utility of scientific methods in promoting human efficiency in industry. In preplacement we have to think of vocational selection and guidance. It directly depends on the qualities possessed by the individual. It is done by analysing a job. In industry, vocational selection is more important. Every job has got two aspects—the job aspect and the man aspect. In job aspect, we take into consideration the different processes involved in it and the abilities required for carrying them out successfully. Regarding man aspect, we take into consideration the qualities of the man. Regarding job aspect, we have to prepare a jobgram which is a graphical representation showing particular abi-

lities required for satisfactory performance in the job. It is a standard one for the job and for selecting a worker. Psychogram (man aspect) is to be compared to a standard jobgram, to find out whether the man is fit for the job or not. But before preparing a jobgram, a medical officer must know something about the operational technique employed in the various jobs.

Suitable psychological tests should be used to determine the natural qualities possessed by the individual. From the test score a graph can be prepared which is known as psychogram. For proper selection, the services of the industrial psychologist is required.

Some other important duties of an industrial medical officer are :

(1) Establishment and maintenance of proper first-aid units within the factory at key positions and the busiest places.

(2) Proper laboratory for diagnosis and research in industrial toxicology.

(3) If possible, the maintenance of a hospital ; otherwise to make arrangements with approved hospitals and community physicians.

(4) To survey the safety arrangement of the plants.

(5) Maintenance of individual medical record for each worker.

(6) Awareness of all types of occupational diseases pertinent to his own industry.

(7) Maintenance of sickness and absenteeism records.

(8) Organisation of maternity and child health department (including family planning) and family care programme in the labour colonies.

(9) Implementation of health and welfare legislations.

Conclusion

In conclusion, it may be said that the functions of a medical officer in an industrial organisation are manifold, apart from the usual practice of medicine. Industrial Medical Service should be run in co-operation with other departments of industry for, at all times the practice of good medical service is necessary between the management and the labourer. It is always paying to treat the labourer or the worker as a man and not a man as a labourer or worker.

Acknowledgment

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CASE NOTES

PERNICIOUS ANAEMIA WITH SUBACUTE COMBINED DEGENERATION

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Pernicious anaemia of Addisonian type, essentially a disease of white races in temperate climate, is a rare clinical entity in India and other countries of the orient. Study of Indian literature revealed only a few case reports uptill now. Taylor and Chitkara (1940) reported five cases of pernicious anaemia in Indians from the Punjab and contended that this type of anaemia was not rare in that part of the country. Napier (1940) did not agree with the above statement, although Chuttani (1948) presented follow-up information of the two cases described by Taylor and Chitkara (*loc. cit.*).

The next case report on pernicious anaemia appeared after a long period of eleven years when Das Gupta and Chatterjea (1951) reported three cases. Since then Konar (1951) published one case and Chatterjeea (1956) reported 3 cases.

We present a typical case of pernicious anaemia of Addisonian type which we have treated recently.

Case Report

R. N., Hindu, male, aged 50, was admitted to the medical wards of G. M. & Associated Hospitals, Lucknow on 8-9-59. On admission the patient was in such low general condition that he failed to give a detailed clinical history. The following account of his illness could be gathered when his general condition improved. His illness started about 3 years back with an attack of dysentery with passage of blood and mucus and subsequently only mucus. This lasted for about three months. Following this the patient noticed gradually progressive weakness and pallor of the body, and swelling of the feet. He also noticed some tingling and numbness of the lower limbs. The swelling gradually became generalised, and tingling, numbness and weakness so incapacitated him that he had to leave his job one year ago. The anasarca has been waxing and waning but has never disappeared completely. In course of time the patient noticed diminution of appetite and distaste for all types of food. For the last four months he was unable to take any spiced food due to the soreness of the tongue and throat. The past illness and family history were of no significance. There was no past history of chronic

gastro-intestinal disturbance or any bleeding. Before coming to this hospital the patient had only indigenous treatment, without benefit.

On examination the patient was found to be a middle aged man of pale complexion, good build, with puffy face and swelling all over the body. He was mentally dull, uninterested in his surroundings, lethargic and drowsy. Conjunctivae were markedly pale, tongue was white, smooth with loss of papillae and flabby, and the gums were unhealthy. Teeth were dirty and the lower incisors had fallen. Oedema over the legs was present. His temperature was 100°F, pulse 102/minute, and blood pressure 94/52 mm. Hg. Examination showed nothing abnormal in the respiratory and gastro-intestinal systems.

Cardiovascular examination revealed mild cardiac enlargement and a haemic murmur. Examination of the nervous system presented a mentally dull patient responding slowly to questions. He had generalised weakness and the gait was ataxic with positive Romberg's sign. Examination of superficial reflexes revealed bilateral extensor plantar response and deep reflexes of the upper extremity were normal. In the lower extremity only right knee-jerk was present but not exaggerated, and left knee- and ankle-jerks were absent. The sense of vibration and position was impaired in the lower limbs, more so on the left side.

Investigations—Gradually developing anaemia in an elderly man with glossitis and nervous signs of subacute combined degeneration and mental dullness led to a clinical diagnosis of pernicious anaemia with subacute combined degeneration. The case was investigated accordingly. The patient had haemoglobin 2·7 g. per cent, R.B.C. 0·9 mill/c.mm., and P.C.V. 9 per cent. His leucocyte count was 4,200/c.mm. with 70 per cent polymorphs, 26 per cent lymphocytes, 3 per cent eosinophils, and 1 per cent monocyte. Reticulocyte count was 1 per cent and platelets were approximately 75,000/c.mm. Absolute values revealed M.C.V. of 100/cμ and M.C.H.C. of 30 per cent. The general blood picture showed fully haemoglobinised macrocytic red blood cells with moderate anisocytosis and poikilocytosis. A number of nucleated red cells were seen. Some of these nucleated red cells showed morphological characters resembling megaloblasts (late and intermediate), a few microfilaria were also seen. Gastric analysis revealed histamine-fast achlorhydria, and bone marrow showed megaloblastic hyperplasia. No abnormalities were found in stool or urine examination. Fluoroscopy revealed mild enlargement of the heart. Serum bilirubin was only 0·6 mg. per cent and serology was negative for syphilis. Funduscopy revealed no optic atrophy.

Treatment—On the basis of clinical history, examination and investigations, the diagnosis of pernicious anaemia with subacute combined degeneration was fully established. After a blood transfusion of 325 ml., the patient was put on vitamin B_{12} and a high protein diet. Initially he was given 100μg. of vitamin B_{12} intramuscularly daily for 25 days, on alternate days for a week, then 100μg. intramuscularly twice a week for another twelve days and subsequently 100μg. weekly. The patient responded very well. His haematological response is shown in Fig. 1. After two months of consistent rise in haemoglobin up to a level of 14 g. per cent, two subsequent weekly values remained stationery. The general blood picture showed some hypochromia. In addition to weekly 100 μg. vitamin B_{12}, about 180 mg. iron orally per day (polycytol, 1 tablet thrice daily) was started at this stage, together with yeast.

Within the next two weeks the haemoglobin reached 16 g. per cent. Histamin-fast achlorhydria was reaffirmed after the haemoglobin had been

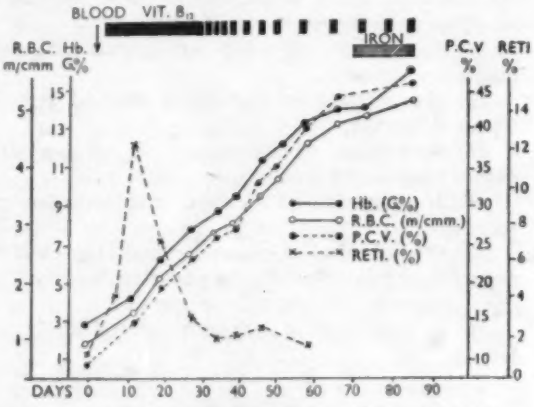

FIG. 1—SHOWING TREATMENT AND HAEMATOLOGICAL RESPONSE IN THE REPORTED CASE

above 12 g. per cent. There was marked subjective improvement in the neurological condition. Objectively, there was no improvement.

COMMENTS

The case reported here satisfied the clinical, haematological, and therapeutic criteria of pernicious anaemia with subacute combined degeneration. However, in addition to the spinal cord lesion, the patient probably had cerebral manifestations of vitamin B_{12} deficiency (Macdonald Holmes, 1956) as suggested by the presence of marked mental dullness and apathy to surroundings.

Pernicious anaemia is rare in the tropics. We could discover only two more cases out of 980 cases of anaemia admitted in our hospital during the last four years.

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STRANGULATED HERNIA OF RARE VARIETIES

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During the course of one year three cases of unusual varieties of strangulated hernia came under our observation, viz., left paraduodenal, right obturator and left femoral.

I. PARADUODENAL HERNIA :

The duodenal fossa was first described by Hensing (1742) and Bordenave (1779), quoted by Watson (1948), reported the first case of duodenal hernia. Moynihan (1906), quoted by Watson (*loc. cit.*), described the presence of the following nine duodenal fossae :

1. *Superior duodenal fossa* (*Eppinger*)—This is present in 40-50 per cent of subjects. It is bounded above by the crescentic superior duodenal fold and lies on the left of the 4th part of the duodenum at the level of the second lumbar vertebra. It is about one inch deep and opens in the downward direction. Herniation in this fossa is rare and if it occurs the sac goes upwards.

2. *Inferior duodenal fossa* (*Treitz*)—This is found in 70 per cent of subjects. It is also situated on the left of the fourth part of the duodenum at the level of third lumbar vertebra. It is bounded by the avascular inferior duodenal fold. It points upwards. It may extend behind the fourth part of duodenum. It mostly shares a common opening with the superior duodenal fossa.

3. *Paraduodenal fossa* (*Landzert*)—It is very frequently present in the newborn but gets obliterated with advance in age. It also lies on the left side of the fourth part of duodenum but is quite away from it. The fold at its orifice contains the inferior mesenteric vein. Its mouth opens towards the right, and the hernia extends to the left.

4. *Mesentericoparietal recess* (*Waldeyer*)—It is formed by lifting up of a fold of peritoneum by the superior mesenteric artery just below the third part of the duodenum. The hernia extends to the right. This fossa is rare.

5. *Mesocolic fossa*—It extends between the layers of the transverse mesocolon and is formed by lifting up of the peritoneum by the ascending branch of the left colic artery.

6. *Postduodenal fossa* (*Gruber*)—It passes to the right behind the fourth part of duodenum and in front of abdominal aorta. Its neck is surgically unimportant. The hernial sac may rarely enter between the two layers of the transverse mesocolon. When present it is the largest duodenal fossa.

The rare varieties are :

7. *Recessus intermesocolicus transversus,*

8. *Duodenojejunal fossa* (*Huschke*), and

9. *Infraduodenal fossa.*

From a practical point of view the internal herniations around the duodenum are subdivided into (a) left duodenal hernia (which occurs mostly in the paraduodenal fossa) and (b) right duodenal hernia (which occurs mostly in the mesenterico-parietal recess).

Hansman and Morton, quoted by Watson (1948), collected 467 cases of internal herniations and found that paraduodenal hernia is the commonest, as it accounted for 53 per cent of cases.

The size of the hernia varies from a hen's egg to that of an adult head, and it may contain from a small knuckle to the entire small intestine. The sac is invariably large in the older subjects. The size of the neck varies from 1·35 inches to over 4 inches in diameter.

Symptoms—The patients usually present with subacute or acute intestinal obstruction but rarely with a resonant 'tumour', piles or pain which is relieved on lying down.

Diagnosis—Pre-operative diagnosis is seldom possible.

Prognosis is serious, mortality being over 50 per cent.

CASE REPORT

P., female, aged 30, was admitted with complaints of absolute constipation for 24 hours associated with progressively increasing abdominal distension, pain and vomiting. She had amenorrhoea for the last 8 months.

On examination she was found to be markedly dehydrated and the abdomen showed diffuse central distension which was resonant on percussion. P.V. examination showed that the pelvis was clear.

After correcting dehydration the patient was operated under general anaesthesia. The abdomen was opened by the right paramedian incision. On opening the peritoneal cavity another layer of serous membrane was found enclosing the coils of the small intestine. Caecum, appendix, ascending, transverse and decending colon were found collapsed and on the right side of the sac. On further exploration the terminal ileum was found to be entering the sac through an opening whose anterior lip had a large vein which was subsequently identified as the inferior mesenteric. By blunt dissection the orifice was increased in the downward direction. Loops of intestine were found adherent at the neck and had to be freed to facilitate withdrawal of the herniated small bowel. It was deeply congested but the colour soon

improved. The orifice was closed by interrupted silk sutures and the abdomen closed in layers.

Postoperative recovery was uneventful.

II. OBTURATOR HERNIA :

Armind de Rousil (1724), quoted by Watson (1948), reported the first case of obturator hernia. Hilton (1848). quoted by Watson (*loc. cit.*), performed the first operation for strangulated obturator hernia. Watson (1946) collected 442 cases from the literature and found that it was six times more common in females and presented usually after the age of 50. Preoperative diagnosis is may be possible on account of Howship-Romberg sign.

Anatomy—The obturator canal measures 2-3 cm. and runs from behind forwards and downwards. It is bounded above by the obturator groove of the superior ramus of pubis and below by upper borders of the obturator membrane, obturator internus and obturator externus muscles. It normally transmits the obturator vessels and nerves from the pelvis to the thigh and the hernia descends in the space around them. The sac may traverse the whole canal or may insinuate itself in between the fasciculi of the obturator membrane or its surrounding muscles.

Case Report

M., female, aged 60, was admitted with history of absolute constipation for 15 days and progressively increasing abdominal distension. On examination she was found markedly dehydrated. The abdomen showed small bowel type of visible peristalsis. Rectal examination was negative.

Laparotomy was done under general anaesthesia through a right lower paramedian incision. On exploration the terminal ileum was found to be collapsed and when traced was found to be entering deep into the pelvic basin. There was progressive distension of the rest of the ileum proximodistally and the end of the dilated loop was also found entering deep into the pelvis and parallel to the collapsed loop. The incision was extended lower down to improve the exposure when a loop of the ileum was found entering the right obturator canal. The dilated loop had perforated at the neck. The constricting ring was cut in a downward and inward direction and the opening dilated with haemostat. The herniated loop was withdrawn. The herniated knuckle of the ileum was found to be gangrenous. It was resected and an end-to-end ileo-ileostomy performed. After peritoneal toilet the abdomen was closed in layers.

Postoperatively she developed severe hypotension from which she was immediately resuscitated, but she expired on the second post-operative day.

III. FEMORAL HERNIA :

It is the protrusion of the abdominal viscera through the femoral ring into the femoral canal. It occurs six times more often in females than in males, and is twice more common on the right side as compared to the left. It accounts for 2·5 per cent of all hernias (Watson, 1948).

Guy de Chauliac (1572), quoted by Watson (*loc. cit.*), first pointed out the difference between inguinal and femoral hernias. Barbette (1672), quoted by Watson (*loc. cit.*), showed that it occurred along the course of the femoral vessels. De Gimbernat (1777), quoted by Watson (*loc. cit.*), was the first to suggest division of the constricting ring on the medial side of the neck to avoid profuse bleeding which occurs if the ring is divided upwards. In 1793 he described the anatomy of the femoral hernia in great detail.

Anatomy—The femoral canal measures 1·5 cm. in length. Lytle (1947) has suggested that the femoral ring and the femoral hernia orifice lie ¼" apart. The former is at the level of the ileopectineal line and is bounded laterally by external iliac vein, superiorly by Thompson's ligament, inferiorly by ileopectineal line and medially by Henle's ligament. The orifice of the femoral hernia marks the lower end of the canal and looks downwards and inwards. It is bounded medially by Gimbernat's ligament, superiorly by the anterior wall of the femoral sheath, inferiorly by Cooper's ligament and laterally by the femoral vein.

Symptoms—Irreducible hernias stay asymtomatic for long as they mostly contain the omentum alone. Small ones are likely to be missed specially in fatty individuals. Over 50 per cent of cases present with strangulation. Mortality in strangulated cases with gangrene is over 25 per cent.

Case Report

M., male, aged 18, was admitted with complaints of absolute constipation and projectile vomiting for three days with pain in the hypogastric region. On examination he was found dehydrated. The abdomen showed small bowel type of visible peristalsis. The patient was totally unaware of a globular, irreducible swelling present in the left groin below the inguinal ligament.

Lotheison's approach was used to expose the sac. The herniated loop showed Richter's type of strangulation but it was viable. After excising the sac the femoral ring was obliterated by stitching the medial portion of the inguinal ligament with the Cooper's ligament by silk sutures. The incision was closed in layers.

Postoperative recovery was uneventful and the case was discharged cured after 12 days' stay.

Summary

Three cases of unusual varieties of strangulation with acute intestinal obstruction have been presented. The modern concept of the anatomy of these hernias and their management have been briefly described.

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JOURNAL OF THE
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CALCUTTA, FEBRUARY 1, 1961

OBSTACLES TO THE PROGRESS OF MEDICAL SCIENCE IN INDIA

Medical science in India has changed a great deal since independence has been achieved. Many medical colleges have been opened, and the Indian Council of Medical Research has been successful in creating an atmosphere more favourable to medical research. American organisations, the Colombo Plan countries, the W.H.O., the British Council, the I.M.A. and others have made it possible for a large number of staff members of our colleges to carry on research at the most advanced foreign institutions or to see for themselves the latest methods and techniques in every branch of medicine and surgery, in laboratory work and, particularly, in teaching. In spite of all these most welcome efforts and opportunities our progress in medical science has been slow compared with that of other branches of science.

Among the reasons for this comparative backwardness, the anomalous position of medical colleges seems one of the most important. With very few exceptions, they are Government colleges, the principal is subordinate to the Director of Medical and Health Services, the Director to the Health Secretary and the Health Minister. Although it is, unfortunately, the rule that heads of all technical departments, chief engineers, directors of agriculture, education, etc., are often directed by much younger administrative officers, totally devoid of any technical knowledge or experience, but mysteriously endowed with all the wisdom by the right to suffix the letters I.A.S. to their name, it is especially unsuitable that an institution imparting medical training up to the highest level should be subject to the orders of authorities who have no medico-educational experience. At the present juncture, when medical administrators are overbusy with building up the far too long neglected health services, especially in rural areas, and when medical education all over the world is in the melting pot, it seems impossible that the administrators could do justice to both. There can be only one sort of institutions, the autonomous universities, where the interests of medical education and medical research would be in safe hands. How can anybody expect an I.A.S. officer, whose department changes overnight from commerce and industries or P.W.D. to medicine, to know more about the most intricate problems of medical education or research organisation than the college principal and his staff? No college can prosper, no postgraduate work succeed, no research spirit flourish where is absent this indefinable something which is called academic atmosphere, which makes a barn a happy home of learning and without which a marble palace remains just a Government department. Nobody can claim that a Health Secretariat could be imbued by academic spirit, by this love of and devotion to teaching and scientific work that are indispensable conditions of medical progress.

Moreover, the interests of medical director and principal are often at variance. A director of medical and health services, interested in his work, is duty bound to find the best possible staff for health centres, district hospitals and all the other links of new chains of modern health services that are being forged now all over the country. The difficulty is not so much to find a few hundred young graduates, although in some States even they are not forthcoming, but to find junior specialists, especially surgeons, experienced enough to let them wield the knife independently without continuous supervision. Where to find them? At the colleges, of course, where the postgraduate, the M.S.'s and M.D.'s have gone through all the stages from housemen up to the position of lecturer. Many of them have been selected for lecturership because they have shown particular abilities for teaching and research. When they worked for their thesis, many acquired a taste for scientific work and every good professor

would encourage such a tendency to build up a scientific tradition. This can be done only from the bottom of the academic profession, from the rank of lecturers, who expect and are expected to rise gradually to become readers and, eventually, professors. To lose them, particularly when they are research minded, is a serious blow to a college, a loss which it may take years to replace. But why lose them, you may ask. Because these are just the people for whom the director of medical and health services is on the look out. For they are qualified to perform in the districts fairly satisfactory surgery, medicine, ophthalmology, etc., and to become junior specialists. Their place at the college will be taken by somebody who through years spent in the mofussil lost contact with college life and work, and acquired different interests, far removed from the academic ones. Both will be disgruntled, the budding researcher who was happy with his students, in library, ward, operation theatre or laboratory, looking forward to an academic career, as well as the man or woman who did excellent practical work in the districts and will find it extremely difficult to start over-night teaching of things forgotten long ago, not to speak of research work, that is expected nowadays from every member of a college staff, because it is only when research is generalised that medical science can approach an international standard. And yet, as long as the present rules remain in force a lecturer must try to get out in the district without regard to the interests of his college, because as long as he remains at the college he cannot become a junior specialist. Nowadays, nobody can be promoted from Civil Assistant Surgeon, Class I to Junior Specialist unless he was independently in charge of beds, and a lecturer, in spite of all the responsible work he has to perform for years, is not recognised as doing work independently.

The only way out of this impossible condition is to remove medical education completely and in every way from the jurisdiction of anybody but the universities. From times immemorial, from the days of Suśruta, who was a university professor at Takshaśila, to the days of Nalanda, medical teaching was an integral part of university work, not to be thought of separated from it. In Germany, Austria, the Scandinavian countries, France or Italy it would be unthinkable to run a medical teaching institution outside the universities and from the youngest assistant to the professor, everybody connected with the teaching of medicine is subject only to the control of the university. Moreover, all the official teaching and practically all medical research in the Continent is done in university clinics and university institutes ; and heads of all these institutions are university professors.

What a world of difference between our colleges, where even the principal has to seek the approval of the Director of Medical and Health Services in every matter of any importance and the university institutions on the Continent or in the U.K. where every professor is his own master. What a world of difference also between the spirit and the atmosphere here and there. In advanced countries, scientific work is the only yardstick ; and one who has achieved something in the way of research is assured of recognition which as a rule means an advancement in his career. Here in India, the only decisive factor is the date of joining Government service. Not even the date of acquiring a postgraduate degree counts at many places. Another very important disadvantage of being a Government college and not a university department is the anomalous fact that the University Grants Commission refuses any help to the Government medical colleges, considering them to be entirely outside their pale. The U.G.C. is by far the most powerful and best endowed source of library and building grants, and without its help it is impossible for a Government college to compete with a university college, irrespective of scientific talent and zeal among the respective staff members.

Many more reasons could be adduced for the claim, undisputed by all unbiased people, that the place of a medical college, particularly of one imparting postgraduate education, is with the

university and nobody could find one single cogent reason for keeping such an institution under the Health Ministry. This is a relic from the times of the British *raj* which as a very valuable compensation for the semi-military discipline of its medical organisation had instituted the all-India cadre of the I.M.S. with ample salaries, excellent prospects and according high social and secure economic position to all its members. How unsuitable it was for research-minded people and how unfit to recognise their value and their needs is fully illustrated by the fate of such pioneers as Sir Ronald Ross and Sir Robert McCarrison. The former was for ever deprived of reaping the ultimate fruit of his revolutionary research, of uncovering the malaria cycle in man, whereas for the latter continuous impediments of his pioneer work on nutrition ceased only when Lord Linlithgow recognised its importance and made his influence felt.

Closely related to our problem are the pay-scales fixed by Governments for medical officers. We do not mean those of the top ranks but the pittances that an M.B.B.S. or even a post-graduate can expect up to the age of thirty compared with the salaries of his contemporaries who after a much shorter period devoted to study, passed out from an engineering college and joined one of the all-India Services or one of the bigger industrial or commercial firms. A talented boy who has a reasonable chance to be selected for the I.A.S. or to get admission to an engineering college or an appointment with a reputable industrial concern would have to be very foolish or quite unusually idealistic to choose the medical profession, which after an inordinate length of the most gruelling studies offers, as far as Governments are concerned, a substandard existence. Considering the problem only from the point of view of progress of medical science, these conditions result in the deplorable fact that by and large only the second-best students opt for a medical career. Of such a student material, the majority of which is hard working, disciplined and well behaved, a fair number of reliable, conscientious doctors will emerge but the brilliant youths, overflowing with ideas, the highly talented, enthusiastic researchers destined to dig up new facts, are scarce indeed in our growing up medical generation. They seem to be more commonly found in physical and chemical laboratories and atomic energy establishments, where their career is determined more by the quality of performance than by red tape.

Another factor which represents a formidable obstacle to medical progress is the difficulty to get postmortems performed regularly, in every case as a matter of course. The whole system of scientific medical diagnosis is based on G. B. Morgani's life work "five volumes about the seat and the cause of diseases, anatomically investigated" (1761). But for the thousands of postmortems performed by him, by K. Rokitansky (1804-1878) and R. Virchow (1821-1902), we would still be basing our diagnosis on the horoscope of our patients. In every developed country every patient seeking admission to a hospital maintained from public funds has to sign a declaration that in case of death nobody will raise any objection to a post mortem examination, which is performed, at least at teaching institutions, in every case—even if the clinician would waive his right, the pathologist, conscious of his duties towards the scientific standard of his institute, insists on performing it and many a time the result is at variance with the clinical diagnosis. A country which is awake to its obligations towards the living, a society that demands uptodate medical standards must enact legislation that secures all the decisive help that can be derived from the dead.

By making all medical colleges university institutions, by creating conditions which would attract some of the best students to the medical profession and by enabling, at least, all medical teaching institutions to perform postmortems as a matter of course, medical science in India could be raised to a standard approaching that of advanced countries.

GENERAL PRACTICE DIGEST

CHRONIC COR PULMONALE

Chronic cor pulmonale may be defined as right ventricular hypertrophy resulting from disordered structure or function of the lung and/or the pulmonary circulation. Right ventricular failure may not be present. It develops only when the pulmonary involvement is diffuse and bilateral rather than unilateral or focal. The functional classification of the aetiology of chronic cor pulmonale is presented below:

Type 1: Pulmonary disease and dysfunction associated with chronic diffuse obstructive emphysema such as chronic bronchitis, chronic pulmonary tuberculosis, bronchial asthma, fibrocystic disease of the pancreas, pneumonoconiosis, sarcoidosis, and kyphoscoliosis.

Type 2: Chronic alveolar hypoventilation syndromes, such as massive bilateral pleural thickening, chronic neuromuscular disorders, kyphoscoliosis, Pickwickian syndrome, disease of the medullary respiratory centre.

Type 3: Pulmonary disease with predominant involvement of the vessels, such as

(a) Intraluminal processes, e.g., multiple recurrent small pulmonary emboli, thrombosis of major pulmonary arteries, sickle cell anaemia, schistosomiasis, primary pulmonary hypertension, diffuse pulmonary vasculitis, other causes of diffuse intravascular occlusion.

(b) Extraluminal processes, e.g., sarcoidosis, beryllium disease, histocytosis-x, haematogenous tuberculosis, Wegener's granulomatosis, pneumonoconiosis, collagen diseases, diffuse pulmonary haemosiderosis, radiation fibrosis of lungs, diffuse interstitial fibrosis caused by chronic obstruction of the pulmonary veins, polycystic disease of the lungs, metastatic carcinomatosis of the lung, other diffuse interstitial infiltrations of the lung, extrinsic compression of main pulmonary arteries.

Type 4: Combinations of types 1 through 3 (above).

Type 1 (Pulmonary Disease with Predominant Chronic Obstructive Emphysema)

The commonest cause of this condition is chronic bronchitis and bronchiolitis. But it may also develop in other diseases, for example when chronic diffuse obstructive emphysema becomes severe in chronic pulmonary tuberculosis, chronic bronchial asthma with associated chronic bronchitis, fibrocystic disease of the pancreas and certain other pneumonoconiosis (silicosis, anthrosilicosis, bauxite pneumonoconiosis and diatomite pneumonoconiosis). It also occurs in those cases of diffuse pulmonary sarcoidosis where the granulomata are predominantly peribronchiolar and endobronchiolar, and in severe kyphoscoliosis where the patients suffer from recurrent and lingering bronchopulmonary infections.

In this condition, the hypertrophy of the right ventricle develops because of its increased work or load, which results from an increased resistance to pulmonary blood flow. This increased resistance is caused by: (1) a reduction in the cross sectional diameter and the distensibility of the pulmonary vascular bed, (2) hypoxia, (3) increased blood viscosity if polycythaemia has developed, and (4) possibly certain functional consequences of an expansion of intrapulmonary vascular shunts, particularly between the bronchial arteries and pulmonary arteries and between the bronchopulmonary veins and pulmonary veins. Hypoxia results mainly from defective intrapulmonary mixing of inspired air to mixed venous blood.

The treatment of this type of chronic cor pulmonale should aim at reversing, at least partially, many of the pathological changes which led to the development of the hypoxia as well as the anatomical reduction of the pulmonary vascular bed. One should aim at combating infection, reducing the diffuse airway obstruction, and improving effective alveolar ventilation. Oxygen therapy should be used with caution because of the insensitivity of the respiratory centre to the carbon dioxide stimulus. It should be given in low concentrations, intermittently, or with mechanical respiratory aids.

Type 2 (Chronic Alveolar Hypoventilation Syndromes)

When of sufficient severity and duration, this type leads to hypoxaemia, hypercapnia, polycythaemia, pulmonary hypertension, right ventricular hypertrophy, and failure. These syndromes may be divided into:

1. Conditions associated with poor functioning of the chest bellows, due to:

(a) massive bilateral pleural thickening;
(b) chronic neuromuscular disorders, eg., severe residual respiratory paralysis following poliomyelitis, the muscular dystrophies, myasthenia gravis, and amyotrophic lateral sclerosis;
(c) kyphoscoliosis; and
(d) the cardiopulmonary syndrome associated with obesity.

2. Primary disease or insensitivity of the respiratory centre. These patients develop hypoxaemia, hypercapnia, secondary polycythaemia, right ventricular hypertrophy, and eventually failure.

Treatment of this type of syndromes can be successful only if alveolar ventilation is improved. Intensive treatment of the acute respiratory infection is necessary. The use of a mechanical respiratory aid is required for improvement of the alveolar ventilation, diminishing the work of breathing, and relieving the hypoxaemia and hypercapnia.

Type 3 (Pulmonary Disease with Predominant Involvement of the Vessels)

Vascular and intravascular involvements include multiple repeated small pulmonary emboli, thrombosis of major pulmonary arteries, sickle-cell anaemia with multiple pulmonary arterial and arteriolar thrombosis, schistosomiasis with pulmonary obliterating endarteritis, primary pulmonary hypertension, and diffuse pulmonary vasculitis. Perivascular involvement includes extensive and diffuse infiltration of the interstitial tissues of the lung, such as sarcoidosis, beryllium disease, histio-

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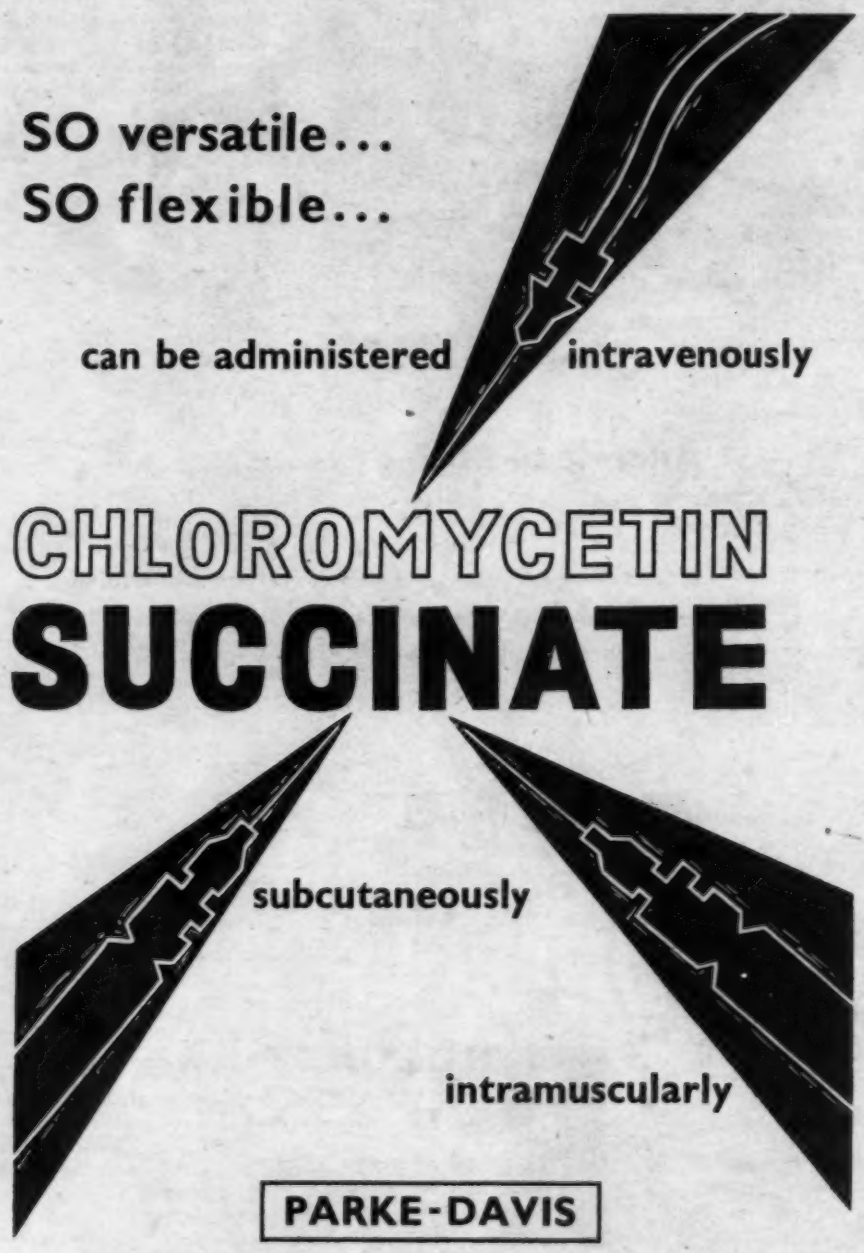
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cytosis-x, haematogenous tuberculosis, Wegener's granulomatosis, collagen diseases, diffuse interstitial pulmonary fibrosis (Hamman-Rich syndrome), idiopathic pulmonary haemosiderosis, radiation fibrosis of lungs, diffuse interstitial fibrosis due to chronic obstruction of pulmonary veins, polycystic diseases of the lungs, severe asbestosis, silicosis where the nodules are predominantly perivascular, metastatic carcinomatosis of the lung, and extrinsic compression of the main pulmonary arteries by an aortic aneurysm or neoplastic lymph nodes.

Treatment of this type of the disease is less satisfactory than in Types 1 and 2. The physical activities of these patients should be markedly restricted. Patients with multiple recurrent small pulmonary emboli, thrombosis of major pulmonary arteries or primary pulmonary hypertension may need interminable anticoagulant therapy. Specific medications such as corticosteroids may be required in interstitial infiltration, such as in sarcoidosis, beryllium disease, vasculitis, collagen disease, and diffuse interstitial fibrosis. The associated bronchopulmonary infection as well as diffuse obstructive emphysema should be intensively treated. Oxygen may be given in high concentration.

Type 1, 2, and 3 Combinations

In many instances structural and functional abnormalities of more than one of the above categories may exist in a patient, contributing to the development of chronic cor pulmonale.

—From an article by Irving Mack, *Rocky Mt. M. J.*, **57** : 59, 1960.

CURRENT MEDICAL LITERATURE

Carotid-Sinus Syndrome

Hutchinson, R. C. and Stock, J. P. P. (*Lancet*, **2** : 445, 1960) from Stock-on-Trent Hospital Group and Midland Centre for Neurosurgery write :

Sixteen cases of carotid-sinus syndrome seen within two years are reviewed.

The main presenting symptoms were vertigo, syncope, focal attacks, and mental changes. One patient was under treatment for idiopathic epilepsy, while another developed permanent dementia through cerebral ischaemia during temporary cardiac standstill.

In cases which do not respond to atropine or other drugs, attacks may be abolished by denervation of the affected sinus.

Arterial pressure changes recorded during induced attacks are described, and the pathogenesis of the syndrome is discussed.

Coronary Artery Disease

Florey, H. (*Brit. M. J.*, **2** : 1329, 1960) from the University of Oxford gives in the following lines the summary of his observations made in the Jephcott Lecture delivered in the Royal Society of Medicine on May 9, 1960 :

It has been said that surgeons score some of their greatest successes when unblocking tubes. A few years ago it would have sounded fantastic to suggest that it might be possible to remove material surgically from the lumen of a coronary artery, but such a procedure is now carried out. Endarterectomy is often successful in restoring circulation in large arteries such as the aorta, but smaller vessels tend to thrombose again. The operation is in what the surgeons call the experimental stage, but their efforts will be watched with great interest, and it is quite possible that future treatment of advanced coronary disease may lie with them.

Less hazardous than endarterectomy is the attempt to improve collateral circulation by putting an irritant into the pericardial sac. Small vessels form in the resulting inflammatory tissue, and at one time it was believed that they enabled blood to pass from the parietal pericardium into the heart but now it is suggested that the new vessels only offer new anastomotic channels between the coronary arteries themselves and so facilitate a more even distribution of the blood reaching the heart.

More radical procedures to bring new blood to an ischaemic myocardium involve grafting external structures into the heart or on to its surface. Of these, perhaps the most interesting is transplantation of the mammary artery. The originator of this procedure (Veneberg, 1946, 1954; Veneberg and Miller, 1953; Veneberg, Munro, Cohen, and Buller, 1955) implanted an open mammary artery into the ventricular muscle and thought that the blood issuing from the vessel would find its way through spaces in the muscle to the ventricular chamber, and that the artery would sprout and eventually join up with the coronary arteries and so increase the blood supply to the heart. Injection of such transplanted arteries with the plastic substances shows that they do eventually form connections with the coronaries, but it does not seem at all probable that the mammary artery sprouts fully differentiated arteries which join up with ventricular arteries. Some light has been thrown on the possible mechanism involved in the development of the additional blood supply by examining the march of events in other tissues. When a piece of duodenum is implanted subcutaneously in a rabbit, vessels from the surrounding tissue unite with vessels of the gut, but this union is accomplished by the sprouting of numerous small vessels, probably capillary size, which join up and are then modelled to form arteries and veins which connect with the original arteries and veins (North, Sanders, and Florey, 1960).

From some experiments on implantation of mammary arteries of the pig into the ventricle we think that the vessel soon thromboses near its free end and that these small vessels, possibly from the vasa vasorum, sprout and connect with pre-existing ventricular vessels and eventually enlarge to form arteriolar connections. After operation in man the connections which develop between the mammary artery and the coronaries do not appear to carry a very substantial amount of blood, and this operation has not gained much currency among cardiac surgeons.

I have already taxed your patience by presenting so much that must be common knowledge to all, but I would like finally to point out the enormous change in point of view which has taken place in the last 30 or so years. Formerly atherosclerosis was thought to be a manifestation of old age about which nothing could be done. No doubt changes that we must consider to be inevitable with advancing years do play a great part, much as we may dislike that idea, but the increased incidence of coronary artery disease in young people has greatly stimulated the examination of all aspects of the disease. We are still in a state of much confusion, but if I have done anything to indicate some of the growing points of investigation I shall be very happy.

Ventricular Septal Defect with Patent Ductus Arteriosus

SASAHARA, A. A., NADAS, A. S., Rudolph, A. M., WITTENBORG, M. H. AND GROSS, R. E. (*Circulation*, **22**: 254, 1960) from the Departments of Pediatrics, Radiology and Surgery, Harvard Medical School, and the Sharon Cardiovascular Unit of the Children's Medical Center, Boston, Mass, give in the following lines the summary of their observations on the clinical and haemodynamic studies on 22 patients of ventricular septal defect with patent ductus:

Twenty-two patients with the combined lesions of ventricular septal defect and patent ductus arteriosus, proved at cardiac catheterisation. are reviewed in detail in regard to their clinical profile, haemodynamic data, and indications for, and results of, surgical repair.

The incidence of this combination of lesions is not so uncommon as would be anticipated by the paucity of the reports in the medical literature. The diagnosis of both lesions is important for management and surgical technique.

The striking findings by physical examination are the gross undernourishment and the wide pulse pressure in the great majority. Almost all have harsh systolic murmurs along the mid left sternal border and only 2 had continuous Gibson murmurs. Consequently, auscultation is of little help in delineating the presence of an associated patent ductus arteriosus.

The electrocardiogram is of minor importance in the diagnosis of this combination of lesions. Roentgenograms in the majority show features common to either lesion alone although the frequency with which left atrial enlargement is found appears to be greater in this combination of lesions.

Careful haemodynamic studies are crucial in the diagnosis of these 2 lesions. At the ductal level passage of the catheter establishes the diagnosis, or an increase in oxygen saturation greater than 5 per cent in comparison to the right ventricular blood strongly suggests the presence of a patent ductus arteriosus. The great majority of the ventricular septal defects were diagnosed by an increase in the oxygen saturation of 10 per cent or greater at the ventricular level. Almost all had pulmonary artery hypertension.

Thirteen patients had surgical intervention; 9 had only closure of the patent ductus arteriosus alone and 4 had complete repair of the lesions. In the former group there were 2 deaths and 2 improved significantly. In the latter group there were 2 surgical deaths and 2 were markedly improved. The 2 surgical deaths appear to be directly related to the massive haemorrhage through the unsuspected patent ductus arteriosus while on cardiac bypass and the subsequent technical difficulty of closing both defects from an anterior thoracotomy.

The relationship of calculated pulmonary vascular resistance to surgical closure of the defects is discussed.

It is suggested that if the patent ductus arteriosus is diagnosed on the basis of a typical machinery murmur, correction of this lesion is indicated, irrespective of the associated ventricular defect. If, on the other hand, the clinical picture is suggestive of a ventricular defect alone and the presence of the combination of lesions is discovered only at catheterisation of lesions, then simultaneous correction of the 2 lesions is recommended. In small infants in whom the combined operation is particularly difficult at the present time, a preliminary trial of medical management is recommended; only if this fails to accomplish the expected result should division of the ductus be undertaken.

Dissecting Aneurysm of the Aorta

ERB, B. D. AND FRANK TULLIS, I. (*Circulation*, **22**: 315, 1960) from the Department of Medicine, University of Tennessee, and the City of Memphis Hospitals, Memphis, Tenn, write:

The clinical diagnosis of dissecting aneurysm of the aorta depends on awareness of the entity, keen clinical suspicion, and an understanding of the varied manifestations. Clinical suspicion is sharpened by association of certain preexisting conditions found to be related to an increased incidence of aortic dissection. Recognition of the Marfan's syndrome, pregnancy, or preexisting hypertension in a patient presenting as an acute catastrophe may lead to the diagnosis. A family history of aortic dissection is similarly helpful.

The variable manifestations call for careful reasoning. Multiple system involvement in many cases is the initial lead in establishing the diagnosis. The many systems frequently involved in the symptomatology of aortic dissection have in common the origin of the blood supply. When the aorta is damaged, branches to various organs may be affected so that the symptoms depend on the branches involved. Because any portion of the aorta may be involved in the dissecting process, no single clinical picture suffices for its recognition. Aortic valvular findings often are seen with involvement of the ascending aorta, central neurologic findings may result from occlusion of the carotid arteries, spinal cord manifestations may result from occlusion of the intercostal arteries, renal manifestations may be seen with renal artery involvement, and so on down the aorta. However, the pattern of a catastrophic episode—whether cardiovascular, neurologic, or abdominal—calls for consideration of aortic dissection. All of the finesse of the most careful physical examination may be required to make the diagnosis but the co-existence of chest pain, aortic murmurs, and peripheral artery occlusion is practically diagnostic. Laboratory adjuncts including roentgenographic evidence of mediastinal widening, evidence

of hematuria, and the absence of electrocardiographic evidence of myocardial infarction may be helpful. Electrocardiographic evidence suggestive of myocardial infarction does not, however, exclude aortic dissection.

Dissecting aneurysm of the aorta now is a surgical emergency that requires early accurate diagnosis and early surgical treatment, if the natural survival rate of 10 per cent is to be improved.

Antihypertensive Drug *versus* Symptomatic Treatment in Primary Hypertension

PERERA, G. A. (*J.A.M.A.*, **173**: 11, 1960) from the Department of Medicine, Columbia University College of Physicians and Surgeons, and the Presbyterian Hospital writes:

An effort was made to determine the possible role of antihypertensive drugs in lengthening the life of patients with primary hypertension. The 58 patients satisfied rigid criteria for the diagnosis of primary hypertension, and all had had it for at least five years. They were divided into two equal, matched groups, 16 of the 29 matched patient-pairs being male. The test group received a variety of antihypertensive drugs sufficient to maintain blood pressures at or below 160/104 mm. Hg. None of these drugs were given to the contratest group. Both groups received sedatives, analgesics, digitalis, and diuretics as needed and were otherwise treated alike. Within the subsequent seven-year period of observation, 16 patients in each group died, and no significant difference between the two groups was found.

Renal Function and Oral Anti-Diabetic Drugs

HUMMER, N., LEHRNBECHER, M. AND MOELLER, J. (*German M. Monthly*, **5**: 257, 1960) from the Department of Medicine, University of Wurzburg, and the Medical Division, Municipal Hospital, Hildesheim, write:

Repeated examinations of renal functions over many months were conducted on 100 diabetics, 43 of whom required insulin, 19 diet only, and 38 either carbutamide or tolbutamide. Carbutamide and insulin administration led to a similar degree of improvement in renal functions. Patients with a glomerular filtration rate of below 100 ml./min. responded well to oral antidiabetic medication; this may explain the failure of oral medication in juvenile diabetics, because these have a high glomerular filtration rate.

In another series carbutamide clearances were measured in 19 diabetic and 11 non-diabetic subjects with various levels of glomerular filtration. Here again, the response to oral medication was most marked in those patients (whether diabetic or not) who had the lowest glomerular filtration rate. The blood level of carbutamide showed poor correlation with response; carbutamide clearance was correlated with positive or negative response only in diabetics. There was a highly significant correlation between the urinary excretion of glucose and carbutamide. Re-absorption, degree of acetylation and diuresis apparently had no relationship to the likelihood of response.

It is concluded that the degree of glomerular elimination is important in determining the response to carbutamide administration but is not the only factor.

Effect of the Sulphonylureas on Fibrinolysis

FEARNLEY, G. R., CHAKRABARTI, R. AND VINCENT, C. T. (*Lancet*, **2**: 622, 1960) from the Gloucestershire Royal Hospital, Gloucester, write:

The oral exhibition of tolbutamide or chlorpropamide was followed by increase in the fibrinolytic activity of the blood (taken when fasting) in seven of eight arteriosclerotic patients. Of three given tolbutamide, one became resistant and another failed to respond, though he afterwards responded to chlorpropamide. Of six patients given chlorpropamide, four showed increased fibrinolysis; one showed a biphasic effect consisting of a reduction of fibrinolytic activity followed by an increase above the control levels; and in the sixth patient chlorpropamide seemed to decrease fibrinolytic activity during the period of observation.

The increases of fibrinolytic activity could not be related to the alterations of blood-glucose. The magnitude of change appears to be related to the control level of fibrinolysis, since those patients with initially long lysis-times showed the greater change.

Six of the eight patients showed clinical improvement, which was considerable in three and moderate in three.

A means of enhancing spontaneous fibrinolysis by oral medication has not previously been described. Further study is required to determine whether the sulphonylureas will be of value in arteriosclerotic diseases.

CURRENT TOPIC

SMOKING AS A PROBLEM AFFECTING HEALTH

KLAUS A. J. JARVINEN, M.D.

Lecturer in Medicine, University of Helsinki

Safeguarding the health of mankind is the duty of the medical profession of the world. Gratifying victories have indeed been won in this work. Many infectious diseases have been held in effective check, several diseases are now successfully controlled, it is even possible to prevent the genesis of certain diseases by prophylactic measures, etc. No one would gainsay that much remains to be done. We have made but brief progress towards the goal of the best possible well-being of mankind as far as health is concerned. An important problem which is still largely unsolved is associated with worldwide use of stimulants and narcotics detrimental to health. It differs essentially from ordinary health problems in that those who are primarily involved generally adopt a negative attitude to the public health work possibly done for their benefit. The addict sets greater value on personal gratification than on health and long life. Societies throughout the world have generally reacted sharply to the use of stimulants and narcotics that rapidly undermine the user's health. But when the damage to health occurs only after several years, the situation changes: the use of the stimulant or narcotic in question is generally allowed to spread un-

hindered. People often become alive to the danger only after the use of the stimulant or narcotic has become a really common disease. This is what has happened with smoking.

Chronic smoking has been shown to increase the frequency of pulmonary cancer, its detrimental effect on the circulatory system is definite, etc. The most notable detrimental effect on health of chronic smoking is, however, the chronic bronchitis and bronchiolitis caused by it : When a chronic bronchiolar process has led to the obstruction of the bronchiolar lumen, the person concerned inevitably develops obstructive pulmonary emphysema. The process is so slow, often taking 20-30 years, that the layman can easily fail to discern the causal relationship between smoking and the emphysema. An investigation has recently been conducted in Finland on the relationship of chronic smoking to obstructive pulmonary emphysema in a larger population group than ever before. It was made possible by a new, simple device developed for the demonstration of bronchiolar obstruction. The results of this study covering 3,375 persons aged over 15 (75 per cent of the population of over 15 in the rural commune studies) were as follows : Of 137 men with pulmonary emphysema, 56 per cent were heavy smokers (had smoked 10 g. or more of tobacco per day for a minimum of 10 years). In the group of men with healthy lungs, the corresponding percentage was only 33·4 The frequency of pulmonary emphysema among males was 0·5 per cent for non-smokers and 1·8 per cent for heavy smokers in the 15-39-year old group. The difference was thus fairly small. On the other hand, in the group of men aged 40-60, the difference was great; 4·9 per cent of the non-smoker and 16·7 per cent of the heavy smoker group had emphysema. The difference was highly significant. The difference was equally clear in the group of men over 60, the corresponding percentages being 23 in the non-smoker and 40 in the heavy smoker group. As far as women are concerned, a statistical analysis of the relationship between heavy smoking and pulmonary emphysema was impossible since only 0·6 per cent of them belonged to the heavy smoker group. It is notable that the pulmonary emphysema frequency of non-smoker men and women are practically the same in the different age groups. It would thus seem that pulmonary emphysema has become a male disease only because smoking is commoner among men. Although chronic smoking ostensibly causes no other direct inconvenience than smoker's cough, which the smoker usually ignores completely, every chain smoker must consider that when middle-aged the certainty that he will have an invalidating pulmonary emphysema is twice as great for him as for his non-smoking neighbour.

There is increasingly definite evidence that chronic smoking is a factor detrimental to health. Physicians all over the world should therefore take a more explicit and pronounced stand against smoking than they have hitherto. The Finnish Medical Association has in fact adopted the subject of combating smoking on its agenda in 1960. This strong and definite stand is called for when the tobacco industry engages persistently in vigorous propaganda for smoking. It is difficult to silence the tobacco industry's drum of publicity, for every new recruit it wins is a sure stream of money for the duration of the victim's life into the coffers of the industrial plant in question. The Finnish Medical Association has concentrated its anti-smoking campaign on the youth of school age. This is a wise policy. Prophylaxis against the tobacco disease is surely more effective than the treatment of the disease in the already chronic stage.—*Wld. M. J.*, **7** : 302, September, 1960.

NOTES AND NEWS

New Secretary General of WMA

The World Medical Association announced on January 1, 1961 the appointment of a new Secretary General to replace Dr. Louis H. Bauer who has retired from the position.

The new appointee is Dr. Heinz Lord, recently of Barnesville, Ohio, and now resident in Sea Cliff, New York.

Dr. Lord has an interesting international background. Born a Peruvian citizen, he was brought up and educated in Hamburg, Germany and Zürich, Switzerland. During the Second World War, being anti-Nazi, he was placed in a concentration camp. Near the end of the war he was on board a steamship, containing 800 internees, which was bombed in the Baltic Sea. Dr. Lord was one of 28 survivors.

DR. LOUIS H. BAUER (*right*), RETIRING SECRETARY GENERAL, W.M.A., CONGRATULATES DR. HEINZ LORD (*left*) ON ASSUMPTION OF THAT OFFICE

Returning to Hamburg at the end of the war, he was active in organising the Marburger Bund.

In 1954 he migrated to the United States. Following three years of further postgraduate training, he entered surgical practice in Barnesville, Ohio. He is a member of the American Medical Association, a Fellow of the International College of Surgeons and a member of the German Urological Society.

Dr. Bauer became Secretary General in April, 1948, shortly after the Association was organised and has continued in that office until this date. During his tenure The World Medical Association has increased its membership from 21 to 56 countries.

Dr. Bauer, a resident of Rockville Centre, New York, is a Past President of the American Medical Association and a former Chairman of the Board of Directors of United Medical Service, Inc. (Greater New York's Blue Shield Plan).

While Secretary General, he made 26 trips to Europe, two around the world, two to Australia, two to the Caribbean area and one to South America, visiting in all over 40 countries, in an effort to unite the medical profession of the world in bringing about higher standards in medical care, medical education and public health.

On his retirement Dr. Bauer became a consultant to The World Medical Association.

Delhi Conference Proposals to Aid Sanitation Drive

Recommendations to relieve "the pressing need for improvement of environmental sanitation" throughout India were made at the close of a five-day conference, sponsored by the World Health Organisation's S. E. Asia Regional Office in co-operation with the government of India.

The conference, in Vigyan Bhavan, New Delhi, was attended by public health experts from various states of India and was concerned primarily with the training and utilisation of auxiliary sanitation workers.

Better training for this class of worker, *more security* in his job, and *better prospects* of advancement, backed by *opportunities* for continued education. All these are envisaged in the recommendations, which begin by clearing away the tangle of designations at present attaching to sanitation workers.

Two main denominations are proposed: first, "Health Inspector"—this being a field worker who has passed a standard health inspector's course, and secondly "Health Assistant"—a field health worker who is under the direction of a health inspector. This term would thus cover such varied current designations as vaccinators, disinfectors, etc.

It is recommended that fully-fledged training institutes, with adequate facilities for theoretical and practical field training of health inspectors, should be established in each State.

To promote a uniform and more effective training programme throughout the country, on a continuing basis, a Central Council—on the lines of the All-India Nursing Council, should be set up. For health inspectors, the minimum period envisaged for the training course is one calendar year which should include three months' intensive practical training.

Nation-wide facilities should, it is urged, be developed so that health inspectors may be able to receive specialised and advanced training. There should also be adequate provision for refresher courses and in-service training.

In view of the urgency of improving environmental sanitation in rural areas an *additional* health inspector should, it is recommended, be appointed *in every Block* exclusively for this work, with senior health inspectors at district or appropriate level.

It is recommended that the services of health inspectors should be provincialised. This, the conference agreed, would give them necessary protection, tenure of office and chance of promotion.

The Nutrition Society, London

The following is the programme of a symposium to be held at the London School of Hygiene and Tropical Medicine, London, W.C. 1., on Saturday 18th March, 1961, on The Place of Food Science and Technology in the Campaign against Malnutrition. Dr. W. R. Aykroyd will preside. The following are the speakers:

Dr. A. T. M. Wilson (Unilever House, London E.C. 4) on Methods of approach to people in the field; Dr. K. K. Halder (India), Dr. O. Koksal (Turkey), Mr. W. Frankul (Iraq), Mr. S. M. Ali (Pakistan), Mr. R. Orra ca-Tetteh (Ghana) on Problems and some solutions; Dr. F. Aylward (Borough Polytechnic, London S.E. 1) on Some African problems; Dr. J. W. Corran (J. & J. Colman Ltd., Norwich) on Factors affecting development of food science and technology and food resources in Pakistan; Dr. W. F. J. Cuthbertson (Glaxo Laboratories Ltd., Middlesex) on Problems in Nigeria; Dr. F. Wokes (Kings Langley, Herts) on Problems involved in the large-scale production of plant protein foods.

Gastroenterologists Elect President

Dr. Louis Ochs, Jr., New Orleans, La., Associate Professor of Medicine, Louisiana State University School of Medicine, was chosen as president-elect of the American College of Gastroenterology, at the Annual Meeting of the College, held on October 23, 1960, in Philadelphia, Pa. He will assume the Presidency at the next Annual Meeting, to be held in Cleveland, Ohio, in October of 1961.

The American College of Gastroenterology announces the 1960 Ames Awards for the best papers published during the past year in its official publication, *The American Journal of Gastroenterology*. First prize was awarded to Drs. W. D. Davis, Jr., Hugh Batson, Jr., William Schindel and Stanley Reichman of New Orleans, La., for their paper The Splenic Approach to the Portal Circulation. The second prize went to Dr. Daniel Stowens, Los Angeles, Calif., for his paper Congenital Biliary Atresia. The third prize was given to Dr. Robert A. Nordyke of Honolulu, Hawaii, for Biliary Tract Obstruction and its Localisation with Radioiodinated Rose Bengal.

New Method of Blood Transfusion

Blood donors can have their blood returned to them after plasma has been extracted from it in a new

method of transfusion described by Dr. Allan Kliman of the National Institute of Health, Washington.

Dr. Kliman told reporters on 6-1-61 the technique could expand the potential supply of plasma at least 30-fold in times of emergency.

Donors now can give a pint of blood, yielding half a pint of plasma, every two months. The new procedure would enable the same person to give repeated donations totalling a quart of plasma in a week.

Dr. Kliman said in one case a quart of plasma was taken from a donor every week for nine weeks without apparent ill-effects. He said the new method offered a quicker and potentially safer means of aiding victims of leukaemia, radiation sickness and some other conditions.

Simple Method of Restoring Heartbeat

A new simple method of restoring heartbeat without surgery, drugs or electric shock has saved the lives of several Americans, a magazine published in London by the United States Embassy, claimed.

The magazine, *Science Horizons* said a surgical team at the Johns Hopkins University, Baltimore, devised the new method, which consists of pressing rhythmically on the lower part of the patient's breastbone and is no harder to apply than artificial respiration.

The article said a second person applying mouth-to-mouth resuscitation is advantageous but not essential, and the method will keep an inert heart pumping blood almost indefinitely.

The American Heart Association was planning a campaign to educate the pubic in the technique.

"Introduction of the massage aroused some scepticism among members of the medical profession in various countries because of its very simplicity," the article added.

"Surgical opening of the chest wall for hand massage of the heart is, of course, still being employed, but the problem with this method is to get the patient to the surgeon in time to save his life.

"The new form of massage can be done anywhere by anyone who has received rudimentary training in its application".

The article reported that the new technique was 100 per cent successful when applied to 20 patients—ranging in age from two months to 80 years—between May, 1959 and February, 1960. Fourteen were still alive.

Of patients given closed chest massage since last July, three out of four survived without damage to the central nervous system, and the method had been wholly successful when used in the operating theatre.

Atom in Health Exhibition

An exhibition of "Atom in Health", organised by the Defence Ministry, will be held at the Defence Pavilion, Mathura Road, New Delhi, from February 9 to 28.

The exhibition will show the use of atomic radiation in the field of medicine, both for diagnosis and cure. Isotopic techniques employed in medical research will also be explained.

Medical Institute Plan Finalised

Plans for the setting up of an Institute of the History of Medicine, by Hamdard Wakf, a charitable trust in the Capital, have been finalised and work on the construction of the Institute building will begin in February at a site near Tughlakabad, in south Delhi.

The Institute will be managed by a 17-member governing body having on it representatives of the Wakf, the Union Government, a recognised Ayurvedic organisation, the Indian Council of Medical Research, and the Council of Scientific and Industrial Research.

A spokesman of the Wakf said on 5-1-61 that it was proposed to equip the Institute library with about 300,000 books and publications of Greek, Egyptian, Arab, Ayurvedic, Sidha and Chinese medicine systems.

He said the Wakf had decided to invite scholars from all countries for conducting research in the Institute.

According to him, the building will take about two years to complete, and another year will be required to equip the library.

Prices of Drugs

Inaugurating the 13th session of the Indian Pharmaceutical Congress at New Delhi on 30-12-60 Shri Karmarkar said that unless the industry "moderate their profits, the people will begin to think in terms of nationalising the pharmaceutical industry. I am hoping this (demand) would not come for a substantial period of time except in certain specific cases".

Shri Karmarkar suggested that one of the steps to lower prices could be by minimising the "huge sums spent on advertisement and propaganda for promoting the drugs". The Government on its side, he said, had recently published the national formulary containing a list of essential drugs and their preparations used in every-day practice and were trying to popularise it.

"I would suggest to the industry that they made available these products under the national formulary names and allow free competition to play its own part in fixing and stabilising the price of drugs."

Tuberculosis and Chest Diseases

The need for intensive researches in tuberculosis and various kinds of chest diseases was stressed by Dr. H. K. Roy, President, Tuberculosis Relief Association, addressing the annual general meeting of the TRA at its new hospital premises (95 Dilkhusa Street, Calcutta) on 8-1-61.

He suggested that every medical delegate who obtained the opportunity of attending the national or international conferences must make it a point to produce papers and ensure that the store of knowledge available to them on these diseases were enlarged.

Dr. Roy said that they were upon a scheme for construction of a new building of the TRA Chest Hospital to raise the number of beds to 100 as against the present number of 20. The hospital, he explained, would admit patients suffering from various kinds of chest diseases including tuberculosis, for study and treatment.

The President appealed to the people to contribute their mite to the Building Fund of the Association and enable them to implement their expansion scheme.

Extension of Nutrition Programme

Extension of the expanded nutrition programme on the pattern approved for Andhra Pradesh and Orissa to some other States is under the consideration of the Government of India.

The programme drawn up for these two States is a joint Government, FAO and UNICEF venture. The UNICEF has allocated $165,000 for Orissa and $217,000 for Andhra.

The programme has three main objectives: (a) increased village, school and home production of nutritionally valuable foods as poultry, eggs and fish, fruit and vegetables; (b) distribution of these foods through women's committees to needy, pregnant and nursing mothers and children with a view to improving their nutritional status and (c) imparting nutritional education through schools, mothers' clubs and community development and extension personnel.

Diet Surveys

Diet and nutrition surveys have already been carried out in rural and urban areas by the Indian Council of Medical Research and State Governments, and these have revealed that diets in general are deficient in essential nutrients.

The Government are now considering how far some of the major recommendations of the National Nutrition Advisory Committee can be implemented.

Two of these are: (a) establishment of 300 centres in rural areas and nearly 500 in urban areas in the first year of the third Plan and 100 additional centres a year during subsequent years for supplying milk to infants, toddlers and pre-school children, and (b) provision of free mid-day meals to at least one-tenth of the expected school-going population between 6 to 11 years (this is estimated at 53·2 lakhs).

The implementation of these two recommendations alone will cost Rs. 50 crores.

CORRESPONDENCE

The Editor is not responsible for the views expressed by correspondents

Irreducibility and Strangulation in Oblique Indirect Inguinal Hernia : A New Concept of its Aetiology and Pathology

SIR,—With reference to the above article by M. Ahmad and A. K. Saha (*J. Indian M.A.*, **35** : 489, 1960) I submit the following :

A preformed peritoneal sac is present in the oblique indirect inguinal hernia. Strains, sudden or continual, with or without muscular weakness, lead to the development of hernia, i.e., entry of abdominal viscera, omentum etc. into the already existing sac. Sudden causes are physical efforts or exertions done haphazardly and without training. Continual causes are factors associated with strain mostly during evacuations, e.g., phimosis, anal fissure, constipation, etc.

Sudden causes are associated with cases which simultaneously and for the first time become suddenly irreducible and strangulated. The peritoneal sac is stretched by the sudden thrust of the contents which produces severe irritation and reaction. The promptness of the reaction also depends on whether an individual is hypertensive, sensitive or hyposensitive. The muscles guarding the inguinal canal, the internal and external oblique muscles undergo reflex contraction. The canal gets compressed. The rings also tighten. This results in strangulation. The seat of stricture may be the lower border of the internal oblique or the external abdominal ring.

The continual causes give rise to hernias which come and go, the reaction at the outset being practically absent. It is a slow and gradual process with the development of a series of anatomical adjustments and changes. These are :

(i) The neck of the sac—The stretching induced by the continual presence of the *forced* down abdominal viscera turns the neck circular and at the same time larger and rounder. The neck retains its elasticity. Gradually the coverings of the sac become matted and indurated and that again especially at the neck of the sac. It is here that the subperitoneal fat is particularly present, serving as the landmark of the internal ring. The subperitoneal fat normally unites with the internal spermatic fascia covering the neck, at a short distance below the internal ring. It is natural that these share in the thickening and induration, with the appearance of fibrosis and retinacula. This brings about rigidity of the neck of the sac.

(ii) The body of the sac—This undergoes thickening subject to irritation as well as to a certain amount of chronic inflammation. Adhesions also appear in the interior of the sac, resulting either in the matting of the contents themselves or the contents adhering to the sac wall.

An irreducible hernia means that the contents of the hernia cannot be reduced completely within the abdominal cavity, as well as when facile reduction is not possible. The thickening and induration of the coverings of the sac, especially at the neck, together with adhesions within sac, gradually render a reducible hernia into an irreducible one. An irreducible hernia becomes strangulated, when additional contents are forced down by strain, especially during defaecation or any other effort. This is possible because of dragging on the neck by the pressure of the contents. Again the coverings of the sac, by their matting together at the neck of the sac, make the latter resistant to stretching and more rigid. The result is strangulation. The seat of stricture is the neck of the sac.

The test described for irreducibility is not convincing to me. The mobility of the whole sac up and down with the neck, as referred to, is always possible because of the fact that the spermatic cord to which the sac is fixed can be drawn down by pulling and goes up when

the pull is released, unless there is strangulation or pathological affections of the cord and testis. I am etc.

Egra, Midnapore. JYOTISH CH. GHOSH

* * *

SIR,—In reply to Dr. Ghosh's letter I have to reply as follows :

Regarding paragraph 2, we have to say that in the article we have not disputed any of the points that the learned author of the letter mentions. However, we would like to mention that bladder neck obstruction and urethral strictures are more important predisposing factors for the production of hernias, than anal fissure which he has placed so prominently. In anal fissure, due to the fear of pain the patient does not strain.

Regarding paragraph 3, we acknowledge the factor of muscular guarding and reflex contraction of the inguinal muscles. But as we have already mentioned in the article, we have only tried to explain the cause of sudden irreducibility in hernias which were formerly quite reducible, i.e., group 2 of our classification (*vide* page 490). In these cases, the only factor which makes the previously reducible hernia suddenly irreducible. in spite of patients' best effort, is the loss of anchorage of the neck of the sac. Regarding our group of 4 cases (*vide* page 490) our explanations are the same, which have always been proved at the time of the operation.

However, we agree that sometime the lower part of internal oblique muscle and the external abdominal ring may be the site of compression and this may lead to strangulation. But these should not and in fact they do not play any part in producing irreducibility.

Regarding paragraph 5, we are glad that the learned author of the letter has acknowledged the presence of 'retinaculam' of the neck of the sac.

Regarding paragraphs 6 and 7, we have to say that the learned author of the letter has mostly repeated the old concept, which we have already discussed in our article (*vide* page 490, sub-heading 'old concept').

Regarding our test of sudden irreducibility, we have only to add that clinicians can easily try this test which surely will be positive especially in thin, non-obese patients.

We only want to stress that the movement of the sac and the neck is not one and the same thing. We agree that the spermatic cord can surely be brought down by pulling upon it. The cause here is that the testes is not a fixed structure. It hangs freely in the scrotum by the vessels of the cord, the vas deferens and by the sustained hanging pull of the cremasteric muscle fibres. Of these structures, except the vas deferences all of them can be stretched to a moderate extent. Even the vas deferens can be very slightly stretched. This will be easily corroborated by any surgeon who has done a large number of operations for undescended testes. No doubt, a pull at the spermatic cord will make the sac tense, because the sac is loosely adherent to the coverings of the cord. It will however, not bring the neck of the sac down, unless and until the neck has lost its anchorage by tearing of the 'retinacular fibres'. I am etc.

Calcutta. M. AHMAD

REVIEWS

Enzymes in Blood, Annals of the New York Academy of Sciences, Vol. 75, Art. 1, Oct. 13, 1958; Published by the Academy; 9"×6", pp. 384; $5·00.

The volume contains a series of papers presented at a conference on Enzymes in Blood, held by the New York Academy of Sciences. The papers have been grouped under the following five heads : 1. Enzymes in white blood cells, 2. Enzymes in red blood cells, 3. Enzymes in blood coagulation and platelets, 4. Serum enzymes and their origin, and 5. Clinical significance of blood enzymes. There are altogether 41 papers contributed by enzymologists, physical chemists, haematologists and clinical investigators. Integrated approach by the investigators in different specialities has brought into bold relief the value of the various enzymic studies from the point of view of basic theoretical considerations as also from practical clinical applications. Enzymatic studies have brought forth considerable new information on the diagnostic and pathogenetic aspects of leukaemias, haemolytic anaemias, coagulation disorders, Wilson's disease, hypophosphatasia, Von Gierke's disease and other hereditary disorders.

The book contains a wealth of information on an intriguing and expanding field and will be most welcome by biochemists, haematologists, biologists and clinical investigators interested in one or other aspect of enzymes in blood.

J. B. CHATTERJEA

Hodgkin's Disease, Annals of the New York Academy of Sciences, Vol. 73, Art. 1. Sep. 5, 1958; Published by the Academy; 9"×6", pp. 308; $4·50.

A series of 21 articles on different aspects of the disease as presented in a conference held under the joint auspices of the New York Academy of Sciences and the Damon Runyon Memorial Fund for cancer research are compiled in this volume. The subject matter has been arranged under the following 4 appropriate headings : 1. The lymphocyte, 2. The reticulum cell, 3. Cytology and aetiology, and 4. Therapy.

Review of the various papers show that during the last 50 years, in spite of voluminous literature on the subject, nothing really significant has been achieved to fill up the basic lacunae in our knowledge. Dr. Rottino has very rightly pointed out, "Research in Hodgkin's disease, except for the early work in pathology and the discovery of the ameliorative effects of x-rays and mustard compounds, has been frustratingly sterile." The chief objective of the monograph has been to stimulate those engaged in fundamental research into finding application of their work to the problem of Hodgkin's disease. Important questions that are discussed at length include the nature and the cause of the disease about which ideas are still more speculative than objective, and the functions of the lymphoreticulo-endothelial system which are primarily affected as also of eosinophils which according to Spiers may contribute to the antibody pool. Finally, the therapeutic aspects have

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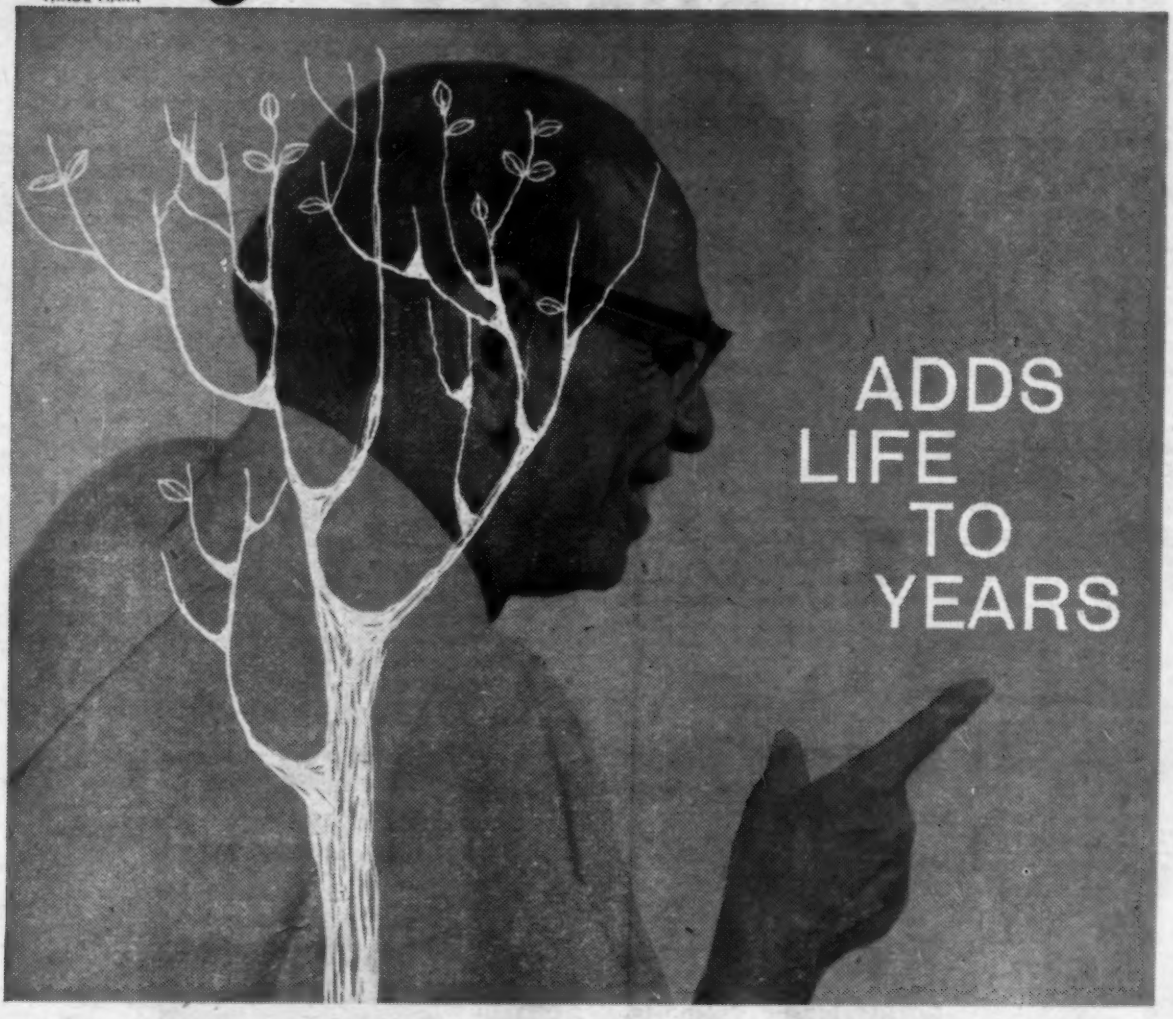

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been ably reviewed. As already pointed out there has been no significant improvement in practical therapeutics except the palliation that is obtainable through judicious use of radiotherapy and available chemotherapy.

In spite of there being no positive achievement of practical significance, the contributions from the academicians and clinicians have served to provide ideas and concepts rich with potentialities for obtaining a better understanding of the disease both in theory and practice. The book is therefore strongly recommended to any one interested in one or other aspect of the physiology and pathology of the lymphoreticulo-endothelial system.

J. B. CHATTERJEA

Polypeptides which Affect Smooth Muscles and Blood Vessels—Edited by M. Schachter, M.D., M.SC., 1960; Pergamon Press, Ltd., Oxford ; 8½"×5½", pp. xvi+ 336; 50sh. net.

This is a very timely and up-to-date treatise on the advancement of knowledge in recent years of the collaborative work of pharmacologists, chemists and pathologists in the field of biologically active peptides of normal structure comprised of 1-amino acids, characteristic of ordinary proteins, such as oxytocin, vasopressin, angiotensin, kalidin, bradykinin and related substances, substance P, leucotaxin, anaphylatoxin, and permeability globulin. Active peptides which are frequently cyclic in nature and contain amino acids of dextroconfiguration, e.g., peptides with antibiotic activity or peptide hormones of the anterior pituitary, are outside the scope of consideration of this book which has been based on the subjects of communications and subsequent discourses in an international symposium sponsored by the co-ordinating committee for symposia on drug action organised by four renowned societies of Great Britain, and held at the Wellcome Building, Euston Road, London, on March 23 and November 24, 1950.

Only recently the chemical structures of oxytocin, vasopressin and angiotensin have been established, and the substances synthesised. Pure bradykinin has been successfully isolated. Although the chemical structure of bradykinin, kalidin and substance P, and other active peptides have not yet been definitely determined, the book relates to the progress made in accurate determination and measurement of these polypeptides in tissues and body fluids and in establishing their particular significance in physiology and pathology, and the relation of their chemical structure to their relative action. All the substances or agents described in this book, like analogues or homologues of oxytocin, vasopressin or angiotensin, or agents like hypertensin may not be present in the body under normal conditions and further some of their pharmacological actions which have been discussed in the book may not be of significantly high importance yet they show the structure and activity relationship and the recent trend of scientific thought and research, and also indicate the lines in which investigations are to be actively pursued. Considerable new and exciting information and knowledge are contained in this book, as for example that there are two separate enzymes, oxytocinase and vasopressinase for these two respective active peptides that oxytocinase may be conveniently estimated by means of a synthetic substrate and its estimation will be possible to do easily in a hospital by a clinical pathologist and further that a formula has been established for angiotensin, and that the relative effects of its synthetic analogues have been studied in its relation to hypertension. New light appears to have been thrown on the role of polypeptides in inflammation and allergy including anaphylactic shock.

This book is a valuable contribution in the field of pharmacology and also of allied subjects like biochemistry, pathology and clinical medicine.

M. L. CHATTERJEE

Family Planning—By J. P. Robinson, M.B., CH.B., 1960, E. & S. Livingstone Ltd., 16-17 Teviot Place, Edinburgh ; 7¼"×4¼", pp. 64; 3s. 6d. net.

The importance of limiting family sizes is now universally recognised. The literature on the subject is already formidable and the addition of another work may appear superfluous. This small well produced paperback however justifies its being by the excellence with which the essential points of the problem are driven home. Divided into seven chapters, the text deals with The Importance of Family Planning; Pre-marital Consultation; Anatomy of the Female Organ; The Menstrual Cycle and the Fertilisation of the Ovum; The Safe Period; Contraceptive Methods, and finally discusses the question, Is Contraceptive Harmful? the answer to which is a qualified 'no', as is known to every physician. Prof. Sir Andrew M. Claye of Leeds writes a foreword and the volume is rounded off by two appendices giving lists of chemicals and appliances. Altogether a very good choice to recommend to one's patients who need family planning advice.

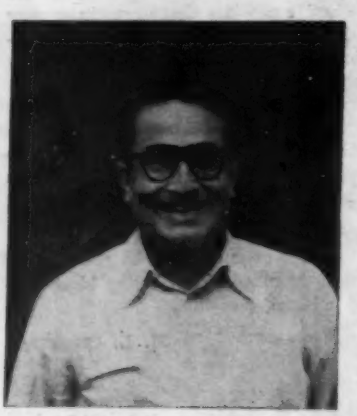
S. P. C.

OBITUARIES

Dr. D. M. Gupta

Dr. Dhruba Mohon Gupta M.D. (CAL.) was born in August, 1914. After a brilliant school and college career he entered the Calcutta Medical College in 1931. During his medical career he earned immediate recognition as a scholar and won a large number of prizes, scholarships and gold medals both of the college as well as of the University of Calcutta. He easily secured the first place in the Final M.B.B.S. examination and within a few years he got his Doctorate of Medicine of the University of Calcutta on his studies 'In Cerebral Arteriosclerosis'. Besides his thesis which has been published partly in the *Indian Heart Journal* and partly in the *Calcutta Medical Journal*, he has contributed a large

number of valuable papers in diverse subjects in Medicine. He was also facile in non-medical literary writings.



DR. D. M. GUPTA

After graduation he entered the Bengal Medical Service and was soon recognised as a dependable, keen and willing worker. He served the Government in several capacities and for the last ten years he was associated with teaching jobs,—first as a Teacher of Medicine, Nil Ratan Sarkar Medical School, later on as an Additional Physician Medical College and still later, at the time of his death, as the Senior Visiting Physician at Nil Ratan Sarkar Medical College and Hospital. As a teacher he was very popular with students and the staff and his abilities were excellent.

Dr. D. M. Gupta was the eldest son of Late Kaviraj Kishori Mohan Gupta and was the son-in-law of Late Dr. D. N. Gupta of Ranchi. Dr. Gupta leaves behind his wife, one daughter and his brothers and sisters and a large number of admirers to mourn his sad and untimely death which took place on November 1, 1960.

Dr. S. K. Bose

Dr. Satyendra Kumar Bose, son of late Jnanesh Chandra Bose of Birshibpur (West Bengal) was born on December 2, 1905, at Calcutta. After his preliminary training in Ahiritola Bengalee Pathsala (Jadu Pandit's school), he obtained a scholarship in the M. E. Examination in 1917 and was admitted in the Hare School, Calcutta, the same year. He passed the Matriculation Examination of the Calcutta University in the year 1922 creditably with over 80 per cent marks in English—a rare achievement. He passed the Intermediate Examination in Science from the Presidency College, Calcutta and joined the Calcutta Medical College in 1924. Qualifying as an M.B. in 1930, he was attached for a number of years to the medical wing of the Calcutta Medical College Hospital as a clinical pathologist. He started his own clinic and laboratory at 32A Dharamtala Street, Calcutta where he continued his career as a clinical pathologist and soon attained conspicuous success. Dr. Bose's death was sad and sudden. He succumbed to an attack of coronary thrombosis on September 7, 1960.

Dr. Bose was one of the early members of the Calcutta Branch of the Indian Medical Association and a very active member of both the Calcutta and Bengal Branches from 1937 till 1950. He had been closely associated with the *Journal of the I.M.A.* and *Your Health*. His contributions to the latter will long be cherished with gratitude.

DR. S. K. BOSE

Dr. M. N. Vaingankar

Dr. Moreshwar Narayan Vaingankar was born on October 22, 1886 at Miraj and completed his primary and secondary education from there. He then joined the Central India Medical School, Indore, and passed S. A. S. Examination in 1911. He was a distinguished scholar and an artist and had a brilliant career throughout. He joined Miraj State Medical Service in 1911, and was the Medical Officer of Laxmeshwar Dispensary till his retirement on 1-4-1939. His devotion to duty and pious nature made him a very popular doctor and an important public figure. After retirement he joined Bombay Medical Service and was appointed at the Civil Hospital, Dharwar, as Medical Officer for abont three years. While leading a retired life at Dharwar he was connected with various social services.

DR. N. K. VAINGANKAR

Dr. Vaingankar died suddenly on 17-10-1960 at his own house at Dharwar. He was 75. His demise is mourned by many.

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SUPPLEMENT

Journal of the Indian Medical Association

VOL. 36 No. 3 CALCUTTA FEBRUARY 1, 1961

XXX PUNJAB STATE MEDICAL CONFERENCE, 1960, SIMLA

The 30th Punjab State Medical Conference was held on November 12-13, 1960 at Simla. Dr. Jagjit Singh, Civil Surgeon, Simla was the Chairman of the Reception Committee and Dr. Raja Ram Bhola presided.

Dr. Jagjit Singh extended hearty welcome to the delegates and guests. In his address, he thanked the State Branch for selecting Simla as the venue of the conference for the first time in the history of the town. He referred to the medical institutions and facilities for medical care existing in the town. He advised the members of the medical profession "not to rely only on the government to do everything to solve health problems but they should actively associate themselves with the authorities concerned in the discharge of its duties as this is their responsibility as well".

Dr. Raja Ram Bhola, the president of the conference in his address dwelt in details upon the major problems of the State. Amongst other things he said:

"During the last two years or so, as you all are aware, the Shops and Commedcial Establishments Act has taken most of the time and attention of the State Council and the Working Committee. With one stroke of pen the Punjab Cabinet made this Act applicable to employees in our profession. This evidently led to great inconvenience to the members of our profession in rendering adequate medical aid to the sick and the suffering humanity, more so, in handling emergencies. Besides the inclusion of doctor's clinics and hospitals within the purview of the Shops and Commercial Establishment Act, would change the underlying basic structure of the medical society. Medical men are not traders nor are they commercial people. The Indian Medical Association tried to seek interviews with the Punjab Labour Minister and the Chief Minister, to impress upon them the desirability and necessity of the exception of this profession from the said Act. But the matter did not make any headway, and there was no alternative left with us but to approach the Hon'ble High Court through a writ petition, which was referred to a larger bench because of certain articles of constitution involved.

OUR DIFFICULTIES

The difficulties that face the Medical Profession these days are increasing day by day. They are registered under the Medical Registration Act and have a code of medical ethics prescribed under the act. Any infringement on our part makes us liable to be prosecuted. Now the Punjab Manufactured Drugs Act, 1958, and the rules framed thereunder, require a registered medical practitioner to keep a complicated record of certain dangerous drugs like morphia, opium, pethidine, cocaine, etc. Besides, the Excise Department has directed the medical practitioners not to keep a stock of more than one pound of very ordinary tinctures and spirits at a time. Great difficulty is experienced by practitioners in obtaining supplies of pethidine and morphia at market rates. A new amendment has been made by virtue of which the registered medical practitioners stocking the above for the use of their patients are required to get themselves registered with the District Excise and Taxation Departments under the dangerous Drugs Act. These are uncalled for and unnecessary restrictions on the medical profession and have to be condemned unequivocally.

PUNJAB MEDICAL COUNCIL

The Punjab Medical Council should in reality look after and protect the rights of the medical profession in the state. But today the Council does not exist. At the time of partition a Council was established for a limited period under a special act. That Council was an official ridden body and it ceased to exist when the life of this special act expired. This was several years ago. Since then the special act has not been replaced by a regular Act under which a regular Council could be established. This explains why there have been no elections to the Punjab Medical Council since partition. The plea of the Punjab Government is that the Punjab Medical Registration Act of 1916 needs very many changes and amendments. We are still waiting for these amendments and God only knows when these would come. This is not a satisfactory state of affairs. The Punjab Government is requested to take immediate action and amend the act in the light of unanimous recommendations of the Council which had majority of official and nominated members. This condition of having no State Medical Council must not be allowed to continue.

SALES TAX ACT

Registered medical practitioners are considered as manufacturers under the Sales Tax Act and are liable to taxation if their turnover exceeds Rs. Ten Thousand. I must here stress that the profession does not want to avoid any legitimate taxation, but it can find it difficult to tolerate the differential treatment being meted to its members practising in different parts of the country. For example the taxable limit for the sales tax in Delhi State is Rs. 30,000/- while in our State it is Rs. 10,000/-. This sort of disparity should not exist in any democratic country.

EMPLOYEES STATE INSURANCE SCHEME

The Employees State Insurance Scheme is in force in several places of the Punjab, but the capitation fee as at present is very unremunerative. It has now been accepted by the experience of working of this system in other States that the panel system of medical relief has proved more beneficial to the worker than the service system. While the service system is rigid, under the panel system the worker has a right to change his doctor as he desires. This right serves as an indirect incentive to the doctor to give his very best to his insured worker.

The medicines in list 1 which are prescribed by Panel doctors are very much insufficient and it is not possible to treat most of the diseases. These lists should be revised and made up-to-date. Special hospital facilities should be provided for the labourers. In the mean time arrangement of Laboratory and X-ray examinations be made with the Registered Practitioners on charges agreeable to all.

QUACKERY

Quackery is widely prevalent and appears to have deep roots and the more we talk of and ask for drastic

and effective measures to control it, the more it flourishes. A qualified medical practitioner suffers considerably in competition with unscrupulous quacks who conform to no rules. The Government had taken a very desirable step in constituting councils to register practitioners of various systems of medicine prevalent in the state. Any person. who has been practising that system as a principal means of livelihood for a period of ten years, has been registered as a practitioner of that system by the respective council, and all persons so registered can style themselves as registered medical practitioners and enjoy all the privileges of the practitioners of the modern medical system, and can style themselves as doctors. This misleads the public and encourages quackery. The latest modification of the definition of Registered Medical Practitioner in the Pharmacy Act by which the States had been permitted to declare any person or class of persons as Registered Medical Practitioner is a great disservice to the scientific system of medicine. The Indian Medical Degrees Act (Amendment Bill), 1958, was sponsored by the Health Minister of the Punjab and published for public opinion, to be put before the legislature during the 1958 session. This bill was most timely, desirable, and in accordance with the wishes of the medical profession. But unfortunately due to certain unknown reasons, the bill was postponed. The bill only seeks that unauthorised persons should not be allowed to use the word 'Doctor', 'Physician' and 'Surgeon' with their names. The Government desire that acts of impersonation, exploitation and misleading the innocent public by using such titles be stopped. The word 'Doctor' by common usage, custom and practice has been used by practitioners of modern system of medicine and everybody knows it. Practitioners of other systems of medicine should be proud of their own system of medicine and should voluntarily prefix their names by the word 'Vaid', 'Tabib', 'Hakim' or 'Homoeopath', and they should practise in that particular system of medicine and should not use potent drugs like sulpha compounds, and anti-biotics and should not give injections which by their system of medicine and training they are not qualified to give. If in their enthusiasm the Government is anxious to encourage the indigenous system of medicine in the State, it should establish full-fledged colleges and hospitals to train graduates in that system of medicine and then such people should get themselves registered with their respective registering councils and allowed to practise in that system of medicine only. Those people who have been registered in the various councils simply because they had engaged themselves in the practice of that system for a period of ten years without holding any qualifications should be required to undergo a special course in the said colleges before they are allowed to work as registered practitioners of that system. A model bill to regulate the practice of medicine so that only persons duly qualified and trained in any system of medicine practise as physicians was circulated to us and the State Council of the I.M.A. has suggested amendments to the same. Such a bill in the amended forms (as amended by the I.M.A.) should be brought before the legislature and passed. It is only then that a death blow will be hurled on quackery. The I.M.A. wishes it, the public at large will welcome it, the Government will get credit of working for the welfare of the people. The main provisions of this bill are, that the various practitioners in various systems should be registered by properly constituted registering councils and the practitioners registered in a particular system of medicine shall not practise in any other system, any body falsely assuming or using any title or description, or addition to the name implying that he holds a degree, diploma, license or certificate conferred, granted, or issued by any of the recognised institutions, shall be cognizable and deterrent punishment will be awarded. Those who possess proper qualifications obtained from proper recognised institutions should be registered and others, who have been practising a system of medicine for ten years should be registered under a separate schedule. Only persons qualified shall sign or authenticate medical or physical fitness certificates required by any law or rules and shall be qualified to give evidence at any inquest or in a court of law as an expert under section 45 of the Indian Evidence Act, 1872, or any matter relating to medicine, surgery or midwifery, and any person contravening any of the provisions, shall on conviction be punished with fine and for subsequent offence fine and imprisonment both be awarded.

Rural Medical Relief

Vast majority of the population in our country resides in the villages and every one of us, whether a politician, a professional or a social worker, has in his mind the illiteracy, backwardness, insanitary living conditions and absence of modern amenities and essentials of life in the rural areas. The Government of Punjab is determined to raise the standard of villages and to uplift the masses. It is a matter of great satisfaction that the Government has at last accepted the recommendations of the Bhore Committee in opening Primary Health units in almost every Community Development Block. But many of those units are not properly staffed. They have only one doctor as against two, the required number and in some there is only a lady doctor. The primary object with which these centres are established is that one of the two doctors by turn should go round the key villages and not only render medical aid to the sick but should also look to the sanitation of the area. With one doctor working in the unit that object is not being fulfilled. So many of the dispensaries in the rural areas were without doctors and staff. The medical men were reluctant to go to those far flung areas because the scale of pay offered to them was very meagre and was not enough to make their two ends meet. Recently S. Partap Singh Kairon, the Chief Minister of the State on the advice of his cabinet has recruited 150 medical men in the P.C.M.S. cadre on the condition that they will be posted in the rural area for the first five years. It is indeed a praise-worthy step and I must appreciate the foresight, wisdom, and the realistic approach of the Punjab Chief Minister, who is more popularly described as a man of the masses. This will make medical officers available in the rural areas. I may at this early stage sound a note of caution to the medical department. The living conditions of the medical staff appointed in the rural areas must be improved. Staff quarters should be provided immediately so that the newly appointed P.C.M.S. officers do not get bored of living in the villages for want of suitable accommodation. Their service rules should be so amended that they get adequate leisure and holidays. While all other Government employees in the State have Saturdays and Sundays free, the doctors have to work day and night without any regard to their rest. Their casual and earned leave has also been reduced along with all other Government employees. They should be compensated for day and night service by allowing them liberal casual and earned leave. Further, to keep their knowledge up-to-date, periodical refresher courses should be arranged for the rural P.C.M.S. officers and post-graduation facilities be also provided, so that they may if they so desire better their prospects. If still the shortage of doctors continues, I would suggest that a sufficient number of Asstt. Surgeons class II be promoted and be made to travel in the rural areas. Some of them are already conversant with life in rural areas.

The School Health Service

To make the nation strong special attention should be paid to the health of children and suitable arrangements made for regular medical examinations of school children at entry to the school and periodical medical examination at least once a year, to detect any defects

DR. JAGJIT SINGH
CHAIRMAN, RECEPTION COMMITTEE

DR. RAJA RAM BHOLA
PRESIDENT OF THE CONFERENCE

or diseases which should be properly and effectively treated. There is no uniform health service for school children in all the districts of the Punjab. At Ferozepore there is a students' health league and all schools contributes four annas per boy towards this scheme. The medical officer visits every school and examine children at least once in a year and a regular record of the growth of the child is kept. There are two dispensaries, an eye testing clinic and a dental unit attached to this scheme. Besides, every school has got a sub-dispensary. In some districts, to mention as an example, Sangreur, and Patiala, the Punjab Government runs a health service manned by a big team of doctors to cater to the needs of school children all over the district in all the High and Primary Schools. Several districts have no school health service at all. There should be a uniform scheme enforced all over the State and the type of the scheme should be worked out by the Punjab Health Department, the Punjab Education Department and the Indian Medical Association jointly. Adequate allotment of finances should be provided in the 3rd five year plan to enforce this scheme. I am of the opinion that when a child enters the school in any class, his chest should be screened and this examination repeated whenever considered necessary by the Medical Officer. To begin with mass screening of all school children should be done. This will enable chest defects to be detected at a very early stage and effective steps can then be taken to cure any defects so discovered. Further, measures to prevent spread of infection to other children and members of their families can be taken.

Mass inoculation of all school children should be done in the primary classes to protect them from enteric gronp of fevers, smallpox, cholera and tuberculosis.

It will not be out of place to mention here, that to improve the nutrition of children in school, and to improve their working conditions adequate mid-day meals and in weak and undernourished children extra supplies of milk should be provided to them. Certain social organisations, particularly the Red Cross, District Child Welfare Council, and others can help a lot.

CONTROL OF MALARIA AND TUBERCULOSIS

Through the agency of the W.H.O. Malaria eradication programme has made steady progress and if the work is pushed on with unabated vigour malaria will be eradicated completely. So also with tuberculosis. But the number of beds available for tuberculosis is extremely small.

Besides there are so many other infectious diseases which are very largely water-borne like cholera, typhoid and dysenteries, etc. They can be prevented only if in addition to fly control safe water supply and underground drainage schemes are completed with a maximum period of ten years. Adequate financial allocation for this health programme in the State should be made in the third Five-Year Plan.

In the meantime I would suggest that the State Government should supervise the health departments of all local bodies in the State so that proper standard of cleanliness and sanitation is maintained in all the local bodies, which in the ordinary circumstances work under handicapped condition due to local influences.

OCULAR DISEASES AND PREVENTION OF BLINDNESS

Blindness is on the increase in the rural areas. People wait for the stray eye camps for advice and treatment and this loss of time leads to delay in treatment. The eye camps are Mela-like things and proper pre-operative and post-operative measures cannot be taken. The remedy lies in opening District eye hospitals. Doctors trained in eye surgery should be provided equipment to carry on their work wherever posted.

LIFE INSURANCE CORPORATION

Our licentiate brothers have a genuine grouse that they are not getting adequate appointments of medical examiners under the Life Insurance Corporation and mostly graduates are preferred. Since the I.M.A. does not make any distinction amongst its member on qualification, this distinction between graduates and licentiates for appointment of medical examiners under the Life Insurance Corporation should cease. Further reports show that the working of the Life Insurance Corporation is unsatisfactory in as much as the agents and the field officers patronise certain doctors for reasons which can be easily well imagined than stated. There should be an even distribution of cases amongst local doctors.

ADULTERATION OF FOOD AND SPURIOUS DRUGS

Adulteration of food has become rampant in the country. More than 50 per cent of the samples tested in the Public Health Laboratory are reported to be

adulterated in our State. Articles whether eatable, or drinkable, cosmetics and even drugs and other essential things of life are found adulterated today. In fact you can hardly come across any article that is not adulterated. Vigorous and effective measures should be taken to do away with this evil.

Medical Education

It is axiomatic that the quality of medical relief will depend on the quality of doctors produced. Ill qualified men will mean poor service to the people. The Punjab Government is opening a new medical college at Rohtak. One medical college has already been opened at Srinagar in Kashmir. Perhaps one may ultimately spring up at Chandigarh. This hasty extension of medical education in the state is likely to create dearth of efficient teachers and lower the standard of teaching. If teachers with suitable qualifications and experience are not available in the Punjab, at present, facilities should be given to suitable candidates to obtain post graduate qualifications and experience in various other hospitals and colleges in the country and abroad. Moreover adequate equipment, hospital beds and clinical material should be provided so that the new colleges opened conform to the standard laid by the Indian Medical Council. In order that a teacher is able to give his best to the students, it is very essential that he should be a full time teacher. which means that he should have complete devotion to teaching, research, and hospital work in one institution that pays the salary. He should not have other outside interests of private practice, business or anything else. The I.M.A. is of confirmed view that private practice of all whole-time salaried medical officers in the State be stopped but before that could be done, their scales of pay have to be brought at par with other Civil Services and they have to be given adequate non-practising allowance. That will entail considerable expenditure and if the Government can provide this financial outlay, in the third Five Year Plan, it will be ideal. Facilities for research in various subjects should be provided under the guidance of experts. Separate wings devoted exclusively to research work should be established in each teaching hospital and ample funds should always be made available to it. This research wing should have a separate existence, but it should work in co-ordination with the research work that may be done in other specialities.

Ludhiana Medical School

All other States in the Indian Union have done away with the licentiates course and the Arya Medical School, Ludhiana, is the only institution in the country to turn out licentiates. Inspite of the repeated demands of the Indian Medical Association, the Arya Medical School, Ludhiana, is being kept alive and extension from year to year is being given to it. Facilities for condensed course for the licentiates in the Punjab are quite meagre and insufficient. Ludhiana Medical School, therefore, must either be upgraded or closed down. The Managing Committee of the Arya Medical School, and the State Government should both rise to the occasion and jointly consider ways and means to upgrade it. Closure would lead to wastage of equipment of the School as also of the vast clinical material available in the Daya Nand Hospital.

Family Planning

Family planning programme is an integral part of the overall health programme of the centre. In many districts a separate family planning section has been formed under the Red Cross Society. Family planning clinics have been opened. But there is great dearth of workers. We should produce really intelligent and fairly well educated social workers, who should be able to tackle the problem psychologically, on individual basis and socially, on family basis. Mere propaganda and distribution of tons of leaflets will not succeed. The opening of clinics alone will not bring the desired result either. The public at large is conscious of family planning due to economic and social reasons. It is the poor, uneducated and ignorant masses who have to be made family planning conscious.

In the third five year plan a much larger allocation than in the second plan is proposed for family planning, because limitation of population is absolutely essential for ensuring better standards of health and living. The I.M.A. firmly feels that satisfactory progress in family planning will not be attained unless the full co-operation of the entire medical profession and social organisations is mobilised. Periodical refresher courses on Family Planning should be arranged for the practitioners and other social workers.

Ourselves

I believe it to be vital to the furtherance of medical ethics and the strength of the profession that all doctors throughout the State should enrol themselves as members of the appropriate branches of the Association. My special attention during this year will be directed towards opening more branches and increasing the membership and I will appeal to all branches in the State to intensify their efforts to achieve this end.

We, medical men, can do much to direct health and other improvements in our local areas, acting jointly through the Indian Medical Association. Preparation of voluntary health programme, to promote and achieve positive health should form a major item in our work of public service. Education of the public on health matters is to my mind another inescapable duty of medical men. Through scientific activities and meetings, through lectures and study circles, we will not only ourselvss gain, but we will help to rouse the self-consciousness of the people and to disseminate useful and simple information on the elementary principles of health. In all such work the I.M.A. can assist valuably."

The Conference passed the following resolutions :

1. This conference highly appreciates the move of the State Government in putting up a draft bill of the Indian Medical Degrees (Punjab Amendment Bill 60) which aims at preventing the unauthorised persons from assuming the title akin to Doctor, Medical Practitioner, etc.. and putting up a stop to the exploitation of unsuspecting, poor and ignorant public by those who pose them as highly qualified persons in medicine and further urges upon the State Government to pass the act in the light of the recommendations made by the Central Health Council held on October 28-29, 1960 at Jaipur.

2. This conference with the view to make the Family Planning successful in the State, offers the services of the Indian Medical Association and urges upon the Government to arrange courses of lectures at Tehsil and District Headquarters, to enable the practitioners to import the proper knowledge to themselves.

3. This conference views with great satisfaction the establishment of the primary health centres at the rural areas of the State but feels distressed to find that some of these centres are not fully staffed thus defeating the purpose for which they were started. This conference therefore strongly urges the Punjab Government that these centres are properly staffed without any further loss of time.

4. This conference urges upon the Government to allocate more funds for the health programme and the health education.

5. This conference is of the opinion that all assistant surgeons employed in railways be ranked as second class gazetted officers as has been done in civil medical department and request the Central I.M.A. to take up the matter with the railway authorities.

6. This conference appreciates the step of the State Government in starting condensed M.B.B.S. course at Amritsar and Patiala and urges upon the Government to increase the number of seats for this course in both these institutions and continue the course till Licentiates are available.

XX BIHAR STATE MEDICAL CONFERENCE 1960, RANCHI

The 20th Bihar State Medical Conference was held on November 18-20, 1960 at the Ranchi Medical College Campus under the presidency of Dr. L. S. N. Prasad, Patna, President of the Bihar State Branch of the Indian Medical Association. Dr. D. P. Dhar was the Chairman of the Reception Committee and Dr. N. P. Srivastava and Dr. B. N. Roy, organising secretaries.

Contrary to the general practice, this year, the State Council meeting covered a full half-day's session on the first day. On the 2nd day Dr. H. N. Shivapuri, President of the Indian Medical Association hoisted the Association Flag which was attended by over 300 delegates and 500 invitees and visitors. In the absence of Dr. S. K. Sinha, Chief Minister of Bihar, due to sudden indisposition, who was originally scheduled to inaugurate the conference, Shri B. C. Patel, Minister for Health, Bihar, performed the inaugural ceremony. In his inaugural address Shri B. C. Patel assured all possible assistance from the Government to the personnel as well as to the institutions and promised to exert his best to ameliorate the sufferings of the masses in respect of medical aid. Dr. Shivapuri installed the president elect of the State Branch for the year 1960-61. Dr. S. M. Hasan, Director of Health Services, Bihar, inaugurated the Scientific Exhibition.

The Scientific Session on the 19th was presided over by Dr. B. N. Banerjee and on the 20th by Dr. Prasad. Scientific discourses on subjects like family planning, smallpox eradication, present position of medical treatment of pulmonary tuberculosis, impact of modern antibiotic treatment on the histopathology of pulmonary tuberculosis, present position of surgical treatment of pulmonary tuberculosis, psychopharmacology, malaria eradication and some aspects of industrial medicine were held.

Messages of good wishes for the conference were received from the President, Vice-President and Prime Minister of India, Governor of Bihar, Raj Kumari Amrit Kaur, former Union Health Minister, Chief Minister of West Bengal, Chief Minister of Gujrat and Lt. Col. V. Srinivasa, Directorate General of Health Service, Government of India.

Inaugurating the Scientific Section, Dr. H. N. Shivapuri, President of Indian Medical Association said, inter alia, "The Scientific Section of a Medical Conference is

DR. D. P. DHAR
CHAIRMAN, RECEPTION COMMITTEE
DELIVERING HIS WELCOME ADDRESS

DR. N. P. SRIVASTAVA
ORGANISING SECRETARY
READING MESSAGES

DR. L. S. N. PRASAD,
PRESIDENT, ADDRESSING
THE ASSEMBLAGE

the most important part. A medical man of today has to be a student all his life, as the modern treatment depends on constant research and experiments, which result in new drugs being found almost every day and the doctor has to keep up with the latest research if he is to keep abreast in his knowledge. In the absence of Refresher Courses in our country, scientific meetings annually provide a forum for us to learn at least something about new trends in treatment.

Vast amounts are being spent on research throughout the advanced countries of the world trying new drugs and newer methods for treatment and cure of diseases. As compared to this our record is disappointing. There is only one really good and properly equipped Research Institute in our country and that has been in existence only for a very short time.

The noble traditions set up by Charak and Shushruta of dissecting and experimenting and thus making new discoveries were soon forgotten and we became followers of tradition, thus creating a void and resulting in stalemate. We will never recover prestige and position in the modern world until we catch up with our original spirit of adventure and new experimentation.

Our Medical Colleges are the best places for original thinking and research, but research cannot be had merely by asking for it or by ordering it and on empty stomachs. A few noble souls may do so, but these are few and far between and all honour to them. It is for the Governments, manufacturers and other rich persons to find money and resources for research, establish trusts and foundations, so that regular funds can flow into research. It is after years of hard work and toil that results follow.

Some years back Sulphas and Antibiotics were not known as also a host of other synthetic and other chemotherapeutic drugs. They were not even dreamt of. And we are still searching for newer weapons to fight the diseases. Most of us are busy practitioners and have hardly time or facilities to go through the mass of literature that is being issued from day to day. And here lies the value of Scientific Section of our Annual Conference. This gives all of us an opportunity to learn the latest discoveries and new modes and fashions in treatment from our colleagues who are better situated in life and are in a position to describe such new happen-

ings. Therefore, this section is a most important part of our annual deliberations and I am sure all of you will take full advantage of the opportunity.

Dr. D. P. Dhar, the chairman of the Reception Committee extended warm and cordial greetings to all present. In his address, he referred to the places of attraction in Ranchi and mentioned how it is industrially developing. He discussed the question of research and felt that it is very necessary that government should start a Research Institute in this State and provide all facilities to those doctors who are research minded. He discussed the condition of doctors who were serving in Local Bodies and said that "for want of proper approach of their just claims and legitimate rights they have not been able to get what they deserve from the authorities. He also pleaded for doctors in services and felt that they require to be treated with better considerations as far as their emoluments and living conditions are concerned". He also said "that if the doctors who are sent to the villages are liberally paid and a few amenities provided, which can be provided easily, the doctors would feel encouraged to go to the villages and render services to the rural population". He also suggested that if the private medical practitioners are given subsidies rural medical care would become more efficient.

The following are from the Presidential Address of Dr. Prasad :

"It will at once be agreed that the problem of rural medical relief in our country is a tremendous task and yet I feel that we have not given proper emphasis to it in medical planning in the Post Independence Era. Even in the Third Five Year Plan out of a total allotment of Rs. 300/- crores for medical relief (Preventive and Curative), only Rs. 20 crores have been set apart for expenditure in running and expanding the medical services in the Community Development Blocks. How can one expect to achieve even palpable success in augmenting Rural Medical Relief with this meagre amount? To-day the doctors and more so the better qualified amongst them are congregating in the urban areas, big and small, with the result that in many villages of India we have practically no medical help worth mentioning available to us in an area of several miles. The idea of covering the country with a net work of Community Development Blocks in the Third Five Year Plan is to help the average Indian to progress in every direction but more so in the field of agriculture, education and health. In the community development programmes of the Nation. medical activity should be of the type of 'Total Medical Care' and to achieve this end, I feel, more funds and more attention are needed. Besides alloting more funds for Rural Medical Relief, one has also to consider the fact as to why young doctors are not being attracted towards the Blocks. Apart from the controversial relationship that exists between the Block Development Officer and the Block Doctor, there is also the question of putting more emphasis on the living and working conditions of the doctors working in the Blocks. The duties of a doctor working in the Blocks are directed towards development, prevention of diseases and their treatment, thus we see that the Block doctor has to carry out the primary and essential tasks, all directed towards the good of the population covered by that particular Community Development Block. In order to cater to the population covered by one Block, it is essential that three doctors are posted in each Block and the supervising authority should regularly check up the work done every three months. Side by side housing accommodation for these doctors should be provided and the seniormost amongst the three doctors should be appointed drawing and disbursing authority under the administrative control of the Civil Surgeon of the district. This practice has been adopted in Madhya Pradesh and it is working very satisfactorily. In order to ensure good and efficient working of the medical services in the Blocks, may I request the State Government to reconsider their decision in the light of the facts stated above.

While on the subject of rural medical relief there is yet another aspect which should be given proper thought and that is the question of creating a separate cadre for Rural Medical Work. In the Third Five Year Plan, it is proposed to increase the number of Community Development Blocks to 544 and naturally the number of doctors employed will be large enough to justify the creation of a Separate Cadre.

Such a step will attract the young doctors if the terms and conditions of their service are properly worked out and a special rural allowance is sanctioned for those working in the villages. Let me close this chapter by stating that every young doctor recruited to the State Medical Service must for a certain period serve in the villages but the Government also should do its best to improve the living and working conditions. The provision of incentives for service in rural areas should include improvement in emoluments, grant of special

A View of the Conference in Session

DR. S. M. HASAN, DIRECTOR, HEALTH SERVICES, INAUGURATING THE EXHIBITION

THE PRESIDENT OF THE CONFERENCE, THE I.M.A. PRESIDENT AND OTHER NOTABLE GUESTS AT DINNER TABLE

rural allowance, residential accommodation and grant of assistance and facilities for further studies.

STATE HEALTH COUNCIL

Last year I had drawn the attention of the State Government to this important subject but so far nothing has been done and no meeting of the State Health Council has been called. The State Health Council should meet periodically and discuss the various medical aspects of the Third Five Year Plan just as the Central Government is helped by the deliberations of the Central Council of Health. It is quite obvious that it is a forum through which the Indian Medical Association can render useful services and advise the State Government on the execution of proposed health schemes. If we pursue the point further, we might reveal the fact that at the end of every financial year the Health Department has to surrender a sizeable unspent balance on account of non-execution of schemes and plans drawn up rather late. Periodic meetings of the State Health Council will ensure more participation and contribution from the Indian Medical Association and one feels confident that there will be no occasion to surrender funds at the end of every financial year.

MEDICAL EDUCATION AND RESEARCH

It is gratifying to note that the State Government have increased the number of admissions to 150 in each medical college and this is being done with a view to produce more doctors needed during the Third Five Year Plan period. It is also being argued that inspite of increasing the number of admissions to the medical colleges, we will run short of the medical personnel and that it may be necessary to reintroduce the licentiate course to cover the deficit. This was discussed in the recent meeting of the Central Council of Health held in Jaipur and this was the subject of comment by the President, Medical Council of India, in the meeting of the Council held recently in Delhi. In our eagerness to manufacture more doctors, we should not lose sight of efficiency and besides the distinction between licentiates and graduates which is fast disappearing will appear again with all its facets leading to confusion and even dissatisfaction amongst the people.

The under-graduate course of medical education must be well planned and executed and if this is done it will lead to a solid basis for post-graduate medical education which is assuming importance everyday almost *paripassu* with the industrial and economic development of the country. That day is not far off when the real application of 'M. B. B. S.' will be the license to just practise and hardly any one will be in a position to practise medicine independently without post-graduate qualifications. If this is the trend, where is the need of reintroducing the licentiate diploma in medicine?

Now coming to Postgraduate Medical Education, let me start with the facts as are existing to-day. The Patna and Bihar Universities have been able to introduce a number of post-graduate diplomas and degrees but little attention so far has been given to the post-graduate set up of the colleges. In each department, post-graduate laboratory and library are lacking and even if the post-graduate teachers are available in adequate numbers their enthusiasm is lacking *because of the fact that no chair has been created in any speciality so far* except for one in Darbhanga which is also not functioning. How can one expect to stimulate 'progress' in the post-graduate departments when the basic thing is wanting? As regards actual teaching, suffice it to say that much time is being lost by keeping things fluid, a fact which I am sure can be avoided. As many posts in the medical colleges are still vacant, the progress gets hampered because of the increased work-load on the existing staff. This is particularly so when we think of the ever increasing number of post-graduates in our medical colleges. Why can't we plan ahead and avoid the delay in making an appointment as soon as a professor or a lecturer retires from service?

In my last address I had suggested the creation of a post of Director of Medical Education whose primary duty would be to think of developing the Institutions with a view to expand medical education both under-graduate and post-graduate and also to create facilities for Medical Research. I might mention here that Punjab has taken the lead by creating a post of Director of Medical Education and Research. By doing so, we would be certainly increasing the training facilities, a point worth considering for the proper execution of Health Programmes in the Third and Fourth Plan periods. The 'tempo' of Medical Research would also improve as it is ultimately linked with the facilities which could be made available. We are informed that proposals for the expansion of medical education during the Third Plan are under examination. The State Government should also actively consider the fact that in order to avoid shortage of medical personnel specially during the Fourth Plan, it may be absolutely necessary to start another medical college during the Third Five Year Plan period. May I suggest that now that Bhagalpur is the seat of a separate University, it will be in the fitness of things to think of starting the fourth medical college there.

THIRD FIVE YEAR PLAN

As we are entering the last year of the Second Plan period, it may be worth our while considering and commenting on the medical aspect of the Third Five Year

Plan. As mentioned earlier, the total outlay on Medical Programmes in the Third Plan has been tentatively placed at Rs. 300/- crores as against Rs. 225/- crores for the Second Plan. That is, the anticipated increase is only Rs. 75 crores, an amount which roughly correspond to the proposed expenditure on Malaria and Family Planning. The health programmes during the Third Plan have been broadly divided into six groups as in the Second Plan. These are :—

(i) improvement of environmental Hygiene, specially rural and urban water supply.
(ii) control of communicable diseases.
(iii) provision of adequate institutional facilities to serve as a base for organising health services.
(iv) provision of facilities for the training of medical and health personnel.
(v) Family Planning.
(vi) Public Health Services including maternal and child welfare, health education and nutrition.

Almost each of the items mentioned above needs to be specially taken up in Bihar. For example, the programme for the control of communicable diseases in the Third Plan includes schemes related to Malaria, Filaria, Tuberculosis, Leprosy, Small-pox and Venereal diseases, all of which are particularly important for Bihar. Could we not then reapproach the Planning Commission for giving us more money during the Third Five Year Plan? In order to properly distribute the amount sanctioned by the Planning Commission, the State Government should appoint a six man expert committee corresponding to the six groups into which the health programmes of the Third Plan have been divided. This expert committee should be able to advise the State Government all through the third plan period taking into consideration the local conditions and needs of the people. I am quite sure this will ensure fair distribution of the funds allotted for curative and preventive purposes.

Family planning—In view of the ever increasing population of the country, this has been rightly considered a key programme for the Third and Fourth Five Year Plans and it is expected that by 1961, there will be 676 urban centres and 1,121 rural centres engaged in family planning. A sum of Rs. 25 crores is being proposed to be spent over family planning programme in India during the Third Five Year Plan. A Special committee set up by the Ministry of Health to make proposals for the third plan has submitted its report and the main emphasis is on the following points :—

(i) Widespread education to create the necessary social background for large family planning programme.
(ii) Integration of family planning activities with the normal health services.
(iii) Facilities for sterilisation through medical and health centres and facilities for distribution of contraceptives.
(iv) Development of training programmes in medical colleges and other teaching institutions.

While I agree with all these four aspects of the family planning movement, I do like to mention that the greatest emphasis at this stage of development in our country should be put on the need for creating the necessary social background, for without that, the family planning centres, whatever be their number, will not achieve the desired goal.

Another important aspect of this movement is the contribution which can come from the Indian Medical Associations. I am glad to mention here that Bihar State Family Planning committee have accepted the trial of a pilot project submitted by the State Branch of the I.M.A. and it is hoped that in the near future we will be able to show good results. In any large scale family planning programme, success in my opinion cannot be achieved through Governmental agencies only and therefore it is essential to take the help of voluntary non-official organisations. May I therefore appeal to the members of the Indian Medical Association to come forward and help to their utmost this nation building effort of the government. I would also like to make it clear that the government should not bank only on the report as to how many centres or family planning clinics have been set up. The family planning programme has many difficult and deeper aspects and when as big a sum as 25 crores is going to be spent in the third five year plan, we should all help the Government so that the desired target of success is achieved. Those members of the Indian Medical Association who practise in the villages will have a great role to play in this movement because our simple folk, men and women, will first consult them on a delicate subject like the control or spacing of births.

May I therefore, close this chapter by appealing to the State Government to take the members of the I.M.A. into greater confidence as far as the family planning programme is concerned.

Pay Scales and Service Conditions

It is well known to the Government that many doctors serving in the District Boards and private factories are drawing very low scales of pay. The State branch of the I.M.A. has been representing to the Government to increase the pay scales of all doctors in the services but no tangible results have been achieved as yet. I am told the proposals are under active consideration of the Government. Some years back, we were assured by the Chief Minister that the service conditions would be improved and that Class I posts in the State Medical Service would be created in proportion to other services. Now that the state Medical Services has become one of the biggest cadres, it is high time that this deficiency viz. miserable pay scales and only one or two class I posts be removed so that the doctors in the services may put their 'heart and soul' in the duties entrusted to them. After all, this subject has been pending before the government for a number of years and may I humbly appeal to the Chief Minister to once for all decide the issue which is a vital one for those who are in the Service.

Indigenous Systems of Medicine

The tentative allotment for the third plan under this head is Rs. 8 crores as against Rs. 6 crores in the Second Plan. It is proposed to establish 'herbaria' with a few selected herbs locally available in the first instance, in individual development blocks.

I am not against the indigenous systems of medicine being encouraged by the Government but we must put them on a sound scientific basis. This will mean that doctors practising in the ancient systems should have their training with a background of Anatomy, Physiology, Pathology and Pharmacology. The other point is that the locally available herbs will have to be chemically analysed, standardised and even tried on animals before we can recommend them for general use amongst the ailing population.

Medical Manpower Survey, Employees' State Insurance Scheme and Primary Health Units

Through the efforts of the Indian Medical Association, it has been possible to find out the exact number of doctors in every remote corner of the State. We have got accurate manpower survey records which may be helpful to the Government in executing various health programmes, particularly Employees' State Insurance Scheme, Primary Health Units in the blocks and school health services. I still feel that Government should give the panel system a trial in certain areas where the Employees' State Insurance Scheme has been launched. In many blocks, the primary health units also are going without doctors and in many schools in the villages there is hardly any arrangement for conducting medical examination of the boys. In my opinion there is untapped medical man power which could be utilised for

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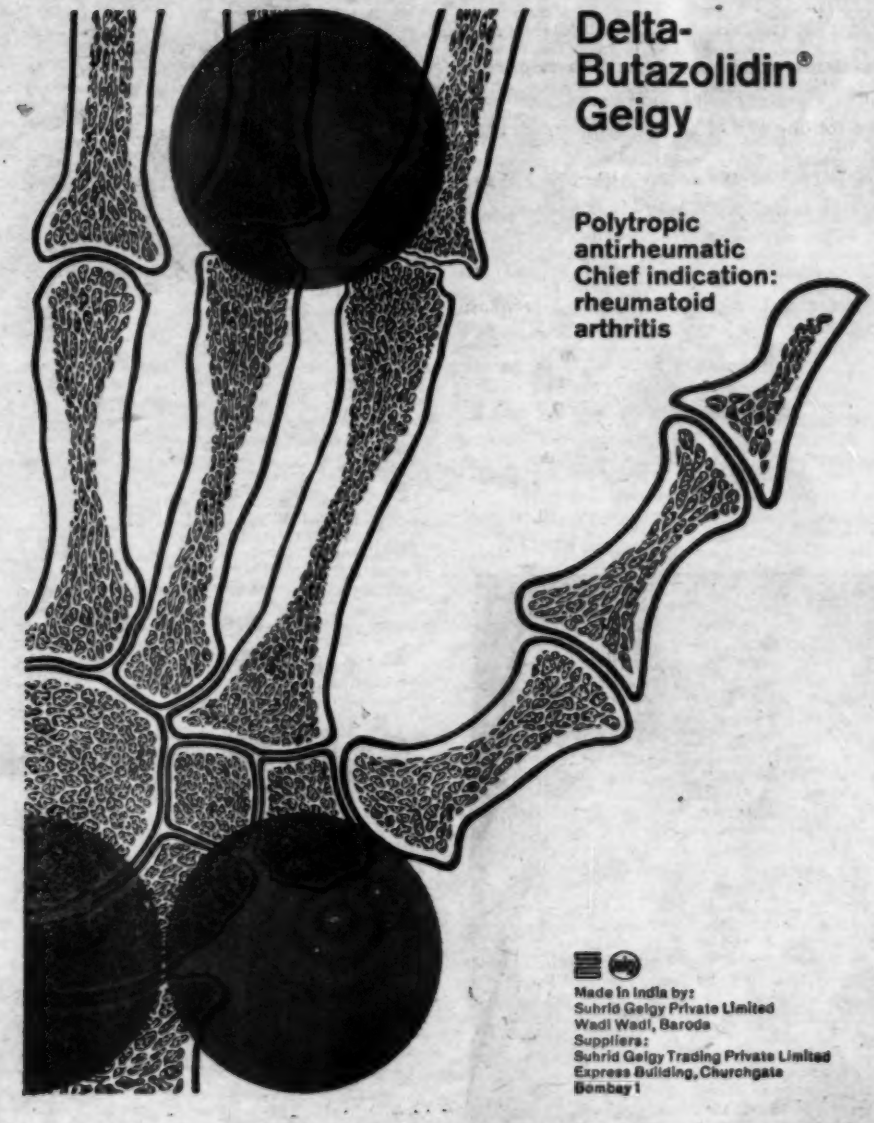

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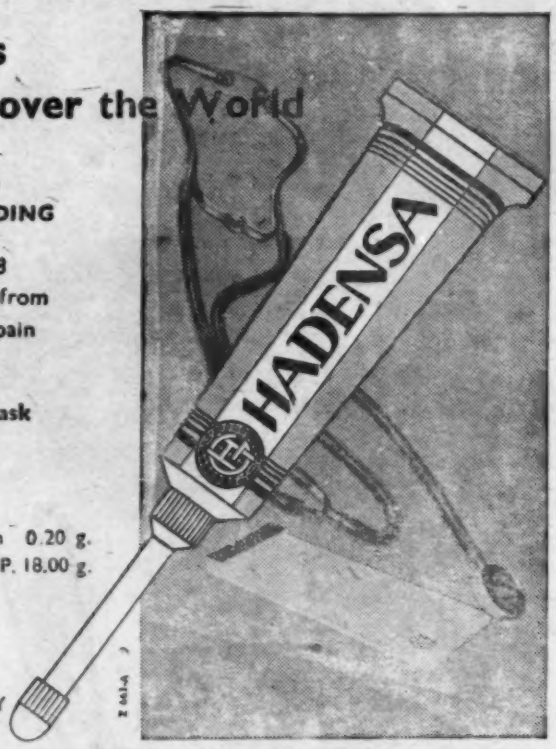

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all these schemes. It is not necessary to appoint all these doctors on a whole-time permanent basis because the nature of work in the Employees' State Insurance Scheme or School Health Services is such that private practitioners employed part-time could do the job. In those primary health units where the State Government have not been able to post doctors on account of shortage of personnel, the private practitioners employed part-time could do the job. As such a step would benefit the people without much cost. I am in favour of recommending it to the State Government for consideration.

PROTECTION OF THE VULNERABLE GROUPS

The vulnerable groups of the population are expectant mothers, musing mothers, school-going children and infants. Special care is needed to cater to their medical needs and we must think as to how best to help them so that healthy new-born, healthy infants and healthy school chidren grow to form the back-bone of a strong nation. In our State, health education bureaux should be set up in different places so that we could organise health education services and produce health education materials. Through primary health units, food supplements and vitamins should be distributed to expectant and nursing mothers and children. At the same time school feeding programmes should be introduced so that children attending the schools got some substantial food during lunch hours.

In this connection I might mention here that the Bihar State Branch of the Indian Medical Association is specially interested in School Health Services. In fact, sometime in the past we had submitted an economical sort of scheme to run the School Health Services and we would again be willing to do our best whenever we are called upon.

I would like to emphasise again that the Indian Medical Association stands for the closest co-operation with the State Government or any other voluntary organisation in matters pertaining to health programmes and that our members would not be lagging behind in contributing positively towards raising the health standards of men, women and children of this State."

The following resolutions were passed at the conference :

1. Resolved that the State Government be requested that :—(a) All District Board dispensaries which have not been taken over by the Government so far be provincialised as soon as possible and all medical officers serving in them be absorbed in the State Medical Service.

Until such time as the dispensaries are taken over by the State Government the district boards may be instructed to pay the medical officers according to the Government scale of pay.

(b) Medical Licentiates having an experience of more than 10 years of service in the local bodies or in other agencies taken over by the Government may be given the pay scale of Civil Asst. Surgeons.

2. Resolved that the existing few so called malaria centres maintained by different district boards be maintained as regular dispensaries as there is little need of any such unit devoted exclusively to antimalaria work.

3. The Conference reiterates previous resolutions passed in Bihar State Medical Conferences on the Status of Medical Officers Working in Community Development Blocks, National Extension Blocks, various B.D.Os and requests the State Government to take suitable steps to ensure that the medical officers are not under administrative or technical control or non-medical personnel.

4. It is resolved that the Government be removed to revise the service conditions and pay scales of medical officers favourable in all branches of Health Department as per recommendations of the Bihar State Branch of I.M.A.

5. Resolved that the Government be requested that with a view to extend better medical and surgical aid to peripheral areas every sub-divisional hospital be equipped with an x-ray plant and ancillary staff.

6. Resolved that the State Government be requested that the post-graduate training for efficiency bar be started at Darbhanga Medical College Hospital to extend the facility to a larger number of cadres in State Medical Services.

7. Resolved that the doctors working in anti-leprosy scheme, tuberculosis clinics and centres, x-ray units, radium and infectious diseases units be granted a risk allowance of Rs. 100/- per month in addition to existing remuneration.

8. Resolved that a full-fledged Leprosy Institute be opened at Patna, Darbhanga and Ranchi with full facilities for specialised treatment in different specialities as major ailments and deformatives are not being attended to properly in subsidiary and domiciliary treatment.

9. For administrative persons there seems to be some anomaly in the working of the health department. To illustrate, officers junior in cadre have been authorised to inspect the working of institution of which the Chief is senior, to be inspecting officer; this puts both the officers in a rather awkard situation. It is hence resolved that the State Government be requested to issue letters immediately to remove such anomalies so that only officers senior in the cadre inspect the works of those juniors to them.

10. It is resolved that licentiates who are appointed medical examiners of L.I.C. should not be debarred from examining the cases of more than 5,000/- as is the practice at present.

11. It is resolved that the Chief Inspector of Mines should honour medical certificates issued by medical practitioners of modern scientific system irrespective of degrees and diplomas held and also that all such practitioners should be eligible to be appointed as certifying surgeons if found otherwise suitable.

12. The Conference reiterates earlier resolutions requesting the Government to check quackery.

13. In view of the important part that our Association is naturally expected to play in the great task of national reconstruction it is desirable that the Government should so arrange that our Association gets representation in all local bodies viz. Notified Area Committee, Municipal Bodies, District Bodies, and Advisory Committees of all welfare organisations, Development Blocks and Community Projects.

14. The conference regrets that licentiates are being discriminated against graduates in the matter of appointment of examiners in Life Insurance examination cases and strongly urges the L.I.C. to remove any such discrimination.

15. Resolved that the Government be requested that suitable steps be taken to ensure that C.A.S. cadre should be open to licentiates of 10 years standing.

16. Due to heavy responsibilities and increased amount of work in the sub-jail the present sub-jail allowance of Rs. 30/- per month which is too meagre an allowance should be increased to Rs. 75/- per month.

17. Resolved that in addition to the jail allowance which the Civil Surgeon is drawing he should be sanctioned the special conveyance allowance of Rs. 50/- for attending his jail duty.

16. Resolved that the Government be requested that all medical officers working in Health Department be given rent free quarters.

19. Resolved that the State Government be requested that the maximum charges for stay in College Hospital should not exceed Rs. 4·50 nP. per day for a State Government servant and that a reasonably lower rate than that existing at present be fixed for members of the public. It is further resolved that if the treating doctors want to forgo their share of the cottage or operation charges in case of members of the Medical Association they may be allowed to do so.

20. According to the latest order of the State Government the State Government employees cannot aspire for posts of higher employment under Government of India or corporate bodies of Government of India because

they can only do so either by resigning or by accepting only 20 per cent of the salary of the new appointment over the existing scale of pay which he was drawing in State service. Result of this is that even with a large number of post with higher emoluments under the corporate bodies sponsored by the Government of India cadre are eminently suited cannot apply. It is therefore resolved that the State Government be requested to withdraw such orders and allow the State employees to apply for posts under Government of India or Corporate bodies of Government of India without any prerequisite conditions.

21. Resolved that the present medical man power of the State be fully utilised in the execution of the proposed health programme of the Government in the Third Plan. Further resolved that these private practitioners who are willing to join the Government service even on a part time basis be favourably considered.

22. Resolved that post of E.M.O. in the sub-divisional level in the rank of Civil Surgeons should be created who will be responsible for health matters in the subdivision, the block medical officers, should be under his control.

23. This conference views with regret the recommendation of the Planning Commission to restart the licentiate course to overcome the shortage of medical personnel and feels that the step is unnecessary and retrograde.

BRANCH NOTES

DHARWAR BRANCH—A meeting was held on 23-4-60. Dr. P. M. Bhende presented a case of Locomotor Ataxy. Dr. N. B. Kabbar gave a talk on School Health. A resolution regarding the standard of the Karnatak Medical College, Hubli, protesting against the Government policy towards it was passed and forwarded to the State Office for further action.

A meeting was held on 21-5-60 when Dr. Upadhye read a case report of Pyrexia.

At a meeting held on 12-6-60, Dr. A. K. Kale, presented a case for discussion. It was diagnosed as Endarteritis Obliterans.

At a meeting held on 10-7-60, the revised Rules and Bye-Laws of the Mysore Medical Association were discussed.

At the meeting held on 7-8-60, the untimely death of Dr. U. B. Narayanrao of Bombay was deeply mourned and condolences were sent to the bereaved family.

A special meeting was held on 4-9-60, when delegates were elected for the annual general body meeting and Subjects Committee.

The annual general meeting was held on 28-9-60 at the Association Room and the following office-bearers were elected for the year 1960-61 : President—Dr. H. V. Upadhye; Hony. Secretary and Treasurer—Dr. A. K. Kale; Representative on Central Council—Dr. H. V. Upadhye; Representative to State Council—Dr. C. S. Kuradikeri.

DIBRUGARH BRANCH—An emergent meeting of the branch was held on 3-12-60. Dr. K. P. Chatia presided. The members recorded with deep grief the sudden and sad death of Dr. U. C. Bordoloi, Retd. Director of Health Services, Assam, a very old member of the branch and conveyed their heartfelt sympathy to the bereaved family.

DUMKA BRANCH –The annual general meeting was held on 24-10-60 at the residence of Dr. B. C. Das Gupta, and was presided over by Dr. D. N. Das Gupta. Seventeen members were present. Discussions were held regarding quackery and the registration of clinics and dispensaries run by registered medical practitioners under the Shops and Establishments Acts and it was resolved that Government should be moved to exempt such clinics and dispensaries from registration. It was decided to send delegates to participate in the ensuing State Medical Conference to be held at Ranchi on November 18-20

The office-bearers for 1960-61 were elected with Dr. D. N. Das Gupta as President, Dr. R. S. Singh as Vice-President, Dr. A. N. Das Gupta as Hony. Secretary and Dr. N. Biswas as the Jt. Secretary. Dr. N. Biswas was elected member of the State Medical Council.

The function was followed by a dinner party given by Dr. A. N. Das Gupta.

DURGAPUR BRANCH –A general meeting was held on 6-8-60. 15 members were present. The proceedings of the last meeting were confirmed. Office-bearers for 1960-61 were elected with Dr. P. Chatterji as President, Dr. N. K. Guha Neogi as Vice-President; Dr. M. N. Das Gupta as General Secretary; Dr. S. Mitra as Jt. Gen. Secretary; Dr. P. N. Mukherjee as Treasurer; Dr. N. Das Gupta as member of the Central Council.

FAIZABAD BRANCH —A meeting of the Scientific Section was held on 12-11-60. Dr. B. N. Bhalla the president U. P. State Branch, I.M.A., attended the meeting and addressed the members, asking them to enrol new members and contribute liberally to the central fund. He advised them to do 'shramdan' if possible. He was glad to learn that Faizabad Branch had 51 members out of 55 doctors and that meetings are held regularly twice a month.

FARRUKHABAD - CUM - FATEGARH BRANCH—A general meeting was held on 23-11-60. Officer-bearers for 1960-61 were elected with Dr. Mrs. C. H. Lal as president; Dr. Mohan Lal and Dr. B. N. S. Sarin as vice-presidents; Dr. J. N. Saksena as hony. secretary; Dr. R. S. Shukla and Dr. P. S. Sud as joint secretaries; Dr. S. D. Hajela, Dr. (Mrs.) C. H. Lal or Dr. J. N. Saksena as members of the State Council; Dr. P. N. Tandon or Dr. P. S. Sud or Dr. S. D. Hajela as representatives for the Central Council. The meeting was addressed by Dr. R. N. Gupta. Hony. State Secretary, U. P. State Branch, who spoke for the enrolment for membership, funds for the central building fund, and also on Common Skin Diseases.

GIRIDIH BRANCH—An ordinary meeting of the branch was held on 4-10-60 under the presidentship of Dr. H. Chatterji. Dr. P.K. Ghosh, Associate Professor of Medicine, R. G. Kar Medical College, Calcutta, gave his impressions of the medical facilities available in the States of America, the U.S.S.R. and other countries. Dr. A. K. Roy Chowdhury of Calcutta donated a sum of Rs. 2500/- to this branch to start a benevolent fund in memory of his late father Dr. A. K. Roy Chowdhury.

The annual meeting of this branch was held on the 1st November 1960. The Secretary read his report for 1959-60. The following office-bearers were elected for 1960-61; President—Dr. H. Chatterji; Vice-Presidents—Dr. N. K. Dass, Dr. G. Sahay; Secretary—Dr. I. Ahmad; Joint Secretary—Dr. B. B. Sarkar; Treasurer—Dr. H. P. Shaw; Auditor—Dr. Rama Charan; Council Representative to State and Centre—Dr. S. Chowdhury.

IV ANDHRA PRADESH PROVINCIAL MEDICAL CONFERENCE, 1961. KAKINADA

The 4th Andhra Pradesh Provincial Medical Conference will be held at Kakinada on 26th and 27th February, 1961. Sri P. V. G. Raju, Minister for Health and Medical, has kindly consented to inaugurate the Conference on 26th February, 1961.

Further information from Dr. P. Sivarama Krishna Rao, Secretary of the Conference.

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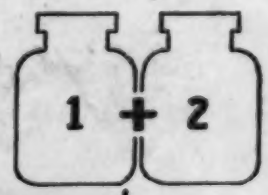

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